

Indian Imprints On Ancient Europe

Sudhakar Raju



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To
The Memory Of My Father

Indological Truths

"The peninsula of India would be one of the first peopled countries, and its inhabitants would have all the habits of the Progenitors of Man before the Flood in as much perfection or more than any other nation. In short, whatever learning Man possessed before his Dispersion may be expected to be found here."

Geoffrey Higgins

The Celtic Druids

Preface

It is generally claimed that the origin of European culture lies in Greek culture and in turn the origin of Greek culture lies in the culture of Egypt, which is considered the cradle of human civilization. This claim needs two basic corrections – first, that Egypt was by no means the cradle of human civilization, it was India, from where Egypt had borrowed liberally, including the very names of its gods; and secondly, that Greek culture cannot be considered the original fount of European culture, because it was itself deeply and abidingly influenced by Hindu culture. Then again, European civilization, as distinct from European culture, is greatly beholden to what the ancient Arabs taught contemporary Europeans. – And what the Arabs taught, they had learnt from Hindus. This, however, did not prevent Hindu influence in ancient Europe from traversing the whole European continent, right from Asia Minor on its eastern flank to Britain in its Western corner. This influence was hoary, pervasive and penetrating.

This Hindu debt of the West was succinctly described by Will Durant when he summarized Europe's oriental heritage in these memorable words: "India was the motherland of our race, and Sanskrit the mother of Europe's languages. She was the mother of our philosophy, mother, through the Arabs, of much of our mathematics, mother, through Buddha, of the ideal embodied in Christianity, mother, through the village communities, of self-government and democracy. Mother India is in many ways the mother of us all."

All in all, the Hindu history of Christian Europe is a fascinating story that begins in the misty past of Vedic India. It is a story worth telling. Hence this modest effort.

Sudhakar Raje

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Overview

➤ A Hindu World

ONCE upon a time, long, long ago, the whole world was Hindu. This is not a hyperbole. It is a statement of fact. As the mists surrounding antiquity are dispelled, layer by layer, by unceasing research in such diverse disciplines as Archaeology, Linguistics, History of Religion, Mythology, History of Science and so on, the truth emerges that from the very dawn of human civilization Aryan / Hindu influence has pervaded the whole world from East to West, from Far East to Far West.

Hindu civilization spread over the entire world, and its landmarks are to be still seen all over the globe. Pointing this out forcefully in his preface to Shrikant Talageri's book *Aryan Invasion Theory and Indian Nationalism* Sita Ram Goel wrote: "Hindu civilization was the dominant civilization of the world for several millennia before the birth of Christ. Hindu presence can still be seen in the language and literature, religion and philosophy, science and technology of almost all peoples, east and west, north and south."

Among Western scholars too there are those who share this view without reservation. For instance, in his book *The Celtic Druids* Geoffrey Higgins says: "The peninsula of India would have all the habits of the progenitors of man before the Flood in as much perfection or more than any other nation.... In short, whatever learning man possessed before his dispersion.... may be expected to be found here, and of this India affords innumerable traces."

➤ Vedas the Fountainhead

The fountainhead of this globe-girdling Hindu influence was the Vedas, the world's ancientmost recorded expression of human thought and knowledge. In his book *India the Land of Vedas*

Wheeler Willcox calls them remarkable works that contain “religious ideas for a perfect life”, while William James calls them an “encyclopaedia of every aspect of life,” ranging from religion to culture, from ethics to law, and from cosmology to meteorology. It would be no exaggeration to claim that they were the acme of human wisdom and human knowledge, and they remain so to this day, even after ten thousand years since they were first composed, later codified and reduced to writing, and finally evolved into what is now known as Hinduism.

Down the corridors of time spanning these millenniums the torch-bearers of this Vedic / Hindu lore took it to distant lands in all directions in all its multitudinous forms. They took with them their philosophical insights and religious practices, their gods and goddesses, their language and literature, their mathematics and medicine, their ethics and law, their astronomy and cosmology. All this knowledge they imparted to the ancient peoples they reached, and left on them an indelible imprint covering the entire gamut of human life, ranging from the metaphysical to the physical, from the religious to the ritual, from the scientific to the societal. This imprint is the stuff of history. The history it made is the history of a Hindu world.

➤ **Global Presence of Hindu Deities**

The most tangible evidence of this global Hindu history is the idols and icons of various deities of the Hindu pantheon that have been found almost all over the world. Some Hindu deities have a truly global presence. Among them Lord Ganesh is easily the most international. Ganesh worship was in vogue in various parts of the globe through the ages, and devotees of this deity were spread in regions as far away from each other as South-East Asia, the Far East and the Americas. So it is no wonder Ganesh idols or images have been discovered in many countries like Sri Lanka, Nepal, Tibet, Indonesia, China, Japan, Afghanistan, and Mexico, to mention only some of them. In Hindu Nepal Ganesh is naturally very popular, but

even in Buddhist Tibet Ganesh is prominently placed above the main entrance of Buddhist temples. In South-East Asia the formidable Hindu influence over this whole region is most evident in the numerous finds of Ganesh shrines. In Indonesia Lord Ganesh is still venerated so highly that his image has been prominently printed on a Rs. 20,000 currency note.

In the Far East there is evidence to suggest that Ganesh was worshipped in China, Japan and Chinese Turkestan. The Chinese Ganesh wears a Chinese silk *kurta*, in Japan he wears the Japanese *kimono*, a long, loose robe, while in Chinese Turkestan he wears trousers. Ganesh also came to be worshipped as a Buddhist deity in the Far East when Buddhism spread in that direction. Ganesh was also present in Central Asia.

In the Far West Ganesh worship had reached the so-called New World, where, according to research, Hindus had reached 5000 years ago. It prevailed in Mexico, home of the ancient Aztec culture of South America, while in Central America worship of the elephant-faced god was one of the many striking similarities between Hindu culture and the culture of the ancient Maya people. According to reputed researcher Wakankar the Red Indians of North America also had a god closely resembling Ganesh.

Next to Ganesh the two major Hindu deities found abroad are Vishnu and Shiva. In the South-East Vishnu images predominate in Thailand. On the other hand Java has a large number of Shiva shrines. To the North, ancient Vishnu icons have been found in Russia. In the now-Muslim Middle East the Shiva cult was popular in Afghanistan during its Hindu history of 1500 years.

➤ **Hindu Temples around the World**

For the gods they took abroad, the Hindus naturally built temples. Consequently, Hindu temples have existed in many parts of the world. In the South-East Angkor Vat is world-famous. In the Far East, evidence of the existence of Hindu temples has come to

light in China with the discovery of Shiva and Vishnu icons in the old seaport of Quanzhou. There was also a Krishna temple in Beijing. Krishna temples have also been discovered in Iran as well as in ancient Mesopotamia.

To the North, Hindu temples have been found in Central Asia. The fire temple near Baku on the Caspian Sea is a remarkable instance in point, for its walls are lined with Sanskrit *shloka-s*.

➤ **International Epics**

Along with Hindu temples, the two immortal Hindu epics, Ramayana and Mahabharat, also spread far and wide. In South-East Asia Ramayana episodes still remain a popular theme for a variety of folk dance, music and theatre forms. In Buddhist Thailand Ramayana, called "Ramakien" (Rama-Âkhyâna, story of Rama), has been promoted by the country's kings, some of whom even wrote their versions of the epic. Thai kings assume the title 'Rama' to this day.

In Muslim Malaysia the rank of Admiral is 'Lakshmana' after Shri Rama's brother. In Indonesia the influence of the Mahabharat is evident even in the presidential palace, where the main hall is decorated with a huge panel exquisitely depicting scenes from the epic.

The influence of both these two great Hindu epics spread even to the Far West. Lopez, Spanish author of the book *The Aryan Races in Peru* has determined through research that "every page of Peruvian poetry bears the imprint of Ramayana and Mahabharat."

Many other vestiges of Hindu influence all over the world are to be found, as even a broad geographical overview can establish.

➤ **India's Precincts**

Beginning with India's precincts, the contiguous countries of Nepal, Bhutan, Tibet and Sri Lanka, can be called the religio-cultural daughters of Mother India. Nepal is a Hindu country, with a 95 per

cent Hindu population. Heramba Ganesh is a popular deity all over that country, and the famous Pashupatinath temple of Shiva has a still-continuing tradition of having a Hindu from India as its chief priest. Bhutan was known to ancient Hindus as Bhotânga, the Sanskrit name from which “Bhutan” is derived.

Tibet has a pre-Buddhist history of 1000 years, when the Bon religion prevailed there, and this religion was remarkably Hinduism - like in many major respects. The very name “Tibet” is derived from the Sanskrit *Trivishtapa*, which also means “Heaven”. Kailash and Mânas Sarovar, two Hindu holy of holies, are located in Tibet. Down south, Lanka, Ravana’s capital, was built on top of Trikuta Mountain, originally for Kubera, and how Trikuta, the tip of Mahameru Parvat in Bharat, was blown off into the sea, is told in *Kamba Ramayana*. Half a dozen Ramayan-related sites have been officially identified by the present administration.

➤ **South-East**

The whole of South-East Asia, stretching from Brahmadesh (Burma/Myanmar) remains perceptibly Hinduised to this day. Indonesia has statues of Lord Krishna and Arjuna in public places and Garuda is the national symbol as well as the emblem of their international airline. Java’s principal city Jogjakarta (Yogyakarta) derives its name from Ayodhya, and Jakarta was originally Jayakartâ, the city of great victory. Thailand too has Garuda as the national symbol and royal emblem. The Thai Reserve Bank was once called the Bank of Ayodhya, and the people still refer to it by that name. Brahmadesh has a whole city named after Lord Vishnu, called Beikthano myo, that is, Vishnu-sthâna, which was an ancient Vedic site.

➤ **Far East**

In the Far East the rituals and practices in the temple in China were the same as are in India. A Sanskrit benediction has been discovered in a cave in that country. In Japan Goddess Saraswati’s picture has been found with a Japanese version of the Veena in her

hand. There are also Japanese versions of Ganesh, as already noted. In Philippines the local Tagalog dialect is said by scholars to contain 25 per cent Sanskrit words, and in New Zealand Maoris, the original inhabitants, trace their origin to India. In Korea, long before Buddhism was established in 372 AD, a Korean prince is said to have married a princess from Ayodhya in 89 AD. His name was Kim Saro. "Saro" is derived from *Surya*, possibly indicating his Solar Dynasty.

➤ **Central Asia**

In Central Asia the Baku fire temple with its walls decorated with Sanskrit *Shlokas* has already been mentioned. A large collection of Sanskrit texts has been discovered in Siberia, and a tribal language of the region, now called Niya Prakrit, was highly Sanskritic. Also, there are many old artefacts in Russian museums that have exclusively Indian motifs on them.

➤ **Middle East**

In the now-Muslim Middle East the whole stretch of countries from Baluchistan on India's doorstep through Afghanistan, Iran, Iraq, Syria, Turkey right up to Arabia and Egypt on the two sides of the Red Sea has a hoary Hindu history. In Baluchistan the Baluchis are identifiable with Bhalânasa, one of the ten communities that fought the Rigvedic *Dâsharâjnya* war, the "Battle of Ten kings". More specifically, the name Baluchistan seems to be derived from the Sanskrit Balokshasthan. During historical times Baluchistan was a Hindu kingdom, and the famous Hinglaj temple is a temple of Kali, who is still revered by Muslims as Bibi Nani.

Afghanistan has a Hindu history of 1500 years, which goes back all the way to the Rig Veda. The *Sapta Sindhavah*, seven rivers of the Vedic heartland mentioned in the Rig Veda, included two rivers of Afghanistan, the Kabul (*Kubha*) and the Kurrum (*Krumu*). Sage Bâshkala, who composed some of the Rigvedic hymns, probably hailed from an Afghan region call Bâshgula. The great grammarian Panini was also born in Afghanistan in a place

called Shâlâturâ. The Pakhtoons, Afghanistan's dominant community, probably derived their name from *Pakhtana*, the Rigvedic participants in the *Dâsharājnya* war. In historical times Chandragupta had conquered the whole of Afghanistan from the Greeks. Later, in the 9th century AD a Brahmin king named Lalliya came to power in Kabul and founded the well-known Shahi dynasty. His descendant Jayapal was Afghanistan's greatest Hindu king and ruled over a vast empire.

Iran was an Aryan land. That is the meaning of "Ariana", from which "Iran" is derived. The country's other name "Persia" is derived from *Parshu*, one of the ten Rigvedic peoples who fought the *Dâsharājnya* battle. When, later, Zoroastrianism was founded it borrowed heavily from the Vedic/Hindu religion. Its core, fire-worship, was a neo-Vedic ritual. Avesta, the language of the Zoroastrian scriptures, is just a phonetic variation of Sanskrit. Iran also had a Hindu kingdom, says Sir William Jones.

Beyond Aryan Iran, Syria's Hindu past starts with its very name, which, according to *Maharahtriya Jnâna Kosh*, probably evolved from its Vedic name *Surya*. It was Suriya, land of the worshippers of the Vedic Sun-God. To the north of Syria, Turkey can be called the starting point of the Hindu history of the now-Muslim Middle East, for here was found history's oldest Hindu temple. Discovered at a site called Nevali Cori in the Anatolian part of Turkey, it was erected 9000 years ago.

Between Aryan Iran and Surya-worshipping Suria/Syria lay Mesopotamia, now largely Iraq, so called because *Mesopotamia* means "between two rivers" (the Tigris and the Euphrates). About 5000 years ago this was the home of a conglomerate of Vedic civilizations established by immigrants from the Sindhu-Saraswati civilization, who set up kingdoms that flourished for long centuries.

The Sumerian civilization was probably the oldest Mesopotamian civilization and is even considered by 'Sumeriologists'

to be the original human civilization, but its Vedic-Indian origin is indicated by the very name *Sumer*, which is derived from the Sanskrit *Sumeru*. The founders of the “asura” civilization of the Middle East were people of Indian origin called Sumeru, states H. R. Hall in his book *The Ancient History of the Near East*. Will Durant writes that the Mohenjodaro civilization had religious, artistic and commercial links with Sumeria and Babylonia, and they endured for 3000 years. The Vedic-Hindu legend of the Great Flood (*Mahâ Pralaya*) and “Fish Incarnation” (*Matsya Avatâra*) prevailed in both these civilizations. In the Babylonian version Manu is called Utnapishtim, a Sanskrit derivative.

The “Asura” civilization was yet another major Mesopotamian civilization. According to *Maharashtriya Jnâna Kosh* the word Asuryâ in the Upanishadic verse *asuryâ nâma té lokâ* resembles “Assyria”, and it can be considered the land of Asuras. Asura capital Nineveh is mentioned in the Puranas, as well as, later, in the Bible. H. R. Hall writes that founders of the Asura civilization went back to 6000 BC, and Pococke writes, “A system of Hinduism pervaded the whole Babylonian and Assyrian empires.” David Frawley says in his book *The Myth of the Aryan Invasion of India* that the Aryans were present in this region “as early as 2200 BC” and “they all worshipped Vedic gods.”

South of Vedic Mesopotamia, Arabia, the home-land of Islam, has had an astonishingly long and rich Hindu pre-history. Hindu presence was quite strong in pre-Islamic Arabia, and equally strong was the presence of Hinduism itself. An anthology of ancient, pre-Islamic, Arabic poetry titled *Sé-arul Oqul* contains poems in praise of the Vedas, Shiva, Krishna, and even Vikramâditya. The poem praising the Vedas is 4000 years old.

About Kaba, the Islamic holy of holies, Sita Ram Goel writes in his well-researched book *Hindu Temples: What Happened to Them?* that he “cannot resist the conclusion that it was a hallowed place of Hindu pilgrimage”. Shiva worship was widespread in Arabia,

and the tradition about Kaba being a Shiva temple was very much prevalent in the days of Guru Nanak. It is preserved in *Makké-Madiné di Goshati*, an account of his travel to Mecca. According to Muslim chronicler al-Masudi some people regarded the Kaba as a temple dedicated to the Sun God. Reputed archaeologist Hrozny also says the ancient Sun God was worshipped in Arabia.

Finally Egypt, just across the narrow water strip of the Red Sea, was clearly and deeply indebted to Vedic India in point of religion, mythology and philosophy. Religion, in particular, very obviously went to Egypt from India, for even the names of Egyptian Gods are identical. Among the supreme Egyptian God corresponds to *Aum* of the Hindus. "In the official theology (of the Egyptians) the greatest of the gods was the Sun," says Will Durant. Shiva was also present, and even Krishna seems to have reached the Egyptian pantheon. There is also an Egyptian version of the Narasimha Avatâra of Hindu mythology. Finally, the Nile was known to ancient Hindus as Nilâ.

➤ **Far West**

The history of Hindu culture in the Far West is both hoary and extensive. The culture of the ancient Inca people of Peru, Aztec of Mexico, and Maya of Central America had remarkable similarity with Hindu culture. Even about North America Dr. I. M. Muthanna says in his book *The People of India in North America* that "Hindus had come here 5000 years ago." Bhikshu Chamanlal's well-researched book *Hindu America* documents Hindu influence in the Americas of yore in great detail. It brings together substantial evidence indicating ancient settlement of America by Hindus. The official history of Mexico acknowledges that "those who arrived first on the continent, later to be known as America, were groups of men driven by the mighty current that set out from India."

The uniquely Hindu concept of Yugas was shared by the ancient Aztecs of Mexico. Wrote Hyatt-Verrill: "The Aztec believed in

Eternity, but aeons or epochs (*Yugas*), each dependent on the Sun. At the close of four Suns the world was supposed to meet disaster.” This last belief is obviously related to the Hindu concept of *Mahā Pralaya*. Many more similarities between the Hindu and Maya deities and calendars can be listed on the basis of documents published in the prestigious *National Geographic* magazine. There are also striking parallels between Hindu and pre-Columbus American art, architecture, religious symbols, cosmological concepts, social structure, royal courts, vocabulary, games, and the not-so-coincidental use of the Hindu-invented Zero in the mathematics of both civilizations.

➤ **Broad Outline**

This overview broadly outlines how Hindu civilization spread to China and Japan in the Far East, Arabia, Mesopotamia and Egypt in the Middle East, and also in the Americas in the Far West. The obvious question here is, if Hindu civilization could reach the Far West, could it not have reached the West? The answer is, it could, and it did. Hindu civilization not only reached ancient Europe, it spread extensively in the continent, and in fact played a dominant role in the religious life of pre-Christian Europe. Hindu history of ancient Europe is hoary, pervasive and penetrating.



1. People

VEDIC INDIANS reached Europe in the misty past over a long period of time. Their presence in this distant continent was the result of waves of population migration from the Vedic homeland that seem to have continued for centuries, if not millennia. This antiquity of the migration phenomenon is rooted in the ancientmost record of human civilization, the Rig Veda. But the Rig Veda is a compendium of hymns. Its companion text, which dealt with history, was the Original Purana. This Purana is today extant in the form of different recensions, each of which is known by a separate name, such as Brahma Purana, Vayu Purana and so on. It is these recensions, the present-day Puranas, that provide the basic details of the worldwide dispersal of Vedic Indians and Vedic civilization. Unlike in the past, these Puranas are no longer dismissed as the religious products of a poetic imagination. Rather, they have acquired recognition as amazingly faithful accounts of human history.

According to these accounts the Vedic heartland comprised the Punjab region, southern Kashmir, and the territory to the north and west of Punjab and Kashmir, probably the contiguous region of Afghanistan. According to the joint testimony of the Rig Veda and the Puranas, three peoples occupied these regions – the Puru in the Punjab region, the Anu in southern Kashmir, and the Druhyu in the territory to the north and west of Punjab and Kashmir. Other Vedic peoples occupied interior, eastern and central parts of the country – the Prâmshu in western Bihar, the Ikshvâku in north-east Uttar Pradesh, the Yadu in western and central India, and the Turvasu to the east of the Yadu. Thus, geographically the Vedic heartland in the north and the Vedic homeland in the east and west together made an extensive Vedic Nation even in Rigvedic times.

➤ **First Druhyu Migration**

It is important to note this substantial territorial expanse of the original Vedic Nation, as Mândhâtâ, an ancient Ikshvâku king, with his capital in Ayodhya, is frequently mentioned in the Rig Veda. He was a close relation of the Purus, and he waged a long war on the distant Druhyus on behalf of the Purus when the Druhyus occupied Puru territory, and defeated their king Angâra. After this defeat the next Druhyu king, whose name was Gandhâra, emigrated to the north-west and established a kingdom which came to be known as Gândhâra after him. Mandhata ruled over a big kingdom; in fact it was so extensive that Vishnu Purana says the sun never set on it.

Whether the Druhyus who founded the Gândhâra kingdom later migrated further west of Afghanistan the Puranas do not say, but they do give a clear indication that not all Druhyus had left the Vedic heartland in the wake of the defeat at Mandhata's hands, some had stayed behind. This indication is provided by Rigvedic hymns describing Dâsharâjnya, or the 'Battle of the Ten kings'. This name was given to a great battle that took place between the Tritsu king Sudâsa and a confederacy of ten peoples. These peoples have been

clearly named as Pakhta, Bhalâna, Alina, Shiva, Vishanin, Shimyu, Bhrigu, Prithu, Parshu, and finally Druhyu. Together they had two group names – Anu and Druhyu. The *Dâsharâjnya* was won by Sudâsa and the Druhyu-Anu-led confederacy defeated.

➤ Second Druhyu Migration

At this point the Puranas make a very clear declaration of the migration of major sections of Druhyus beyond Afghanistan to distant lands to the north – from India to Europe *via* Central Asia. Referring to Prachetas, a contemporary king mentioned in as many as five Puranas, P. L. Bhargava writes: “Five Puranas add that Prachetas’s descendants spread out into the ‘Mleccha’ countries to the north beyond India and founded kingdoms there.” A statement to this effect occurring in Vayu Purana, Brahmânda Purana, Matsya Purana, Vishnu Purana and the Bhâgavata is thus quoted by Pargiter : “*Prachetasah putra-shatam râjânah sarva eva té, mlecchârâshtrâdhipân sarve hyudichim dishâm âshritâh.*” This unanimous Puranic reference to “hundreds of sons” of king Prachetas indicates that it was not the conquests of a king that were being referred to, but a large-scale emigration.

Examining Puranic records for evidence about the identity of the migrating Druhyus in his book *Aryan Invasion Theory and Indian Nationalism* Shrikant Talageri names seven of the peoples ranged against Sudâsa in *Dâsharâjnya* as Iranians and related peoples who later spread out to and occupied the entire belt of territory from Kashmir to Asia Minor, practically touching the borders of Europe. Then he asks: “If this belt were to be extended further, into Europe, which are the Indo-European branches that we would encounter?” His answer is: The Greek (Hellenic) branch in Cyprus and Greece, the Albanian (Illyrian) branch in Albania, and the Celtic branch straddling south-east Europe and Asia Minor. On the other hand, says Talageri, “The only three peoples, among the adversaries of Sudâsa, remaining to be identified, are the Druhyus, the Alinas and

the Shimyus. And on comparing the two groups, we find that : 1. The Druhyus are identifiable with the Druids (the ancient Celts), 2. The Alinas are identifiable with the Hellenes (the ancient Greeks), and 3. the Shimyus are identifiable with the Sirmios / Srems (the ancient Albanians).”

➤ **Druhyus in Europe**

Thus three Vedic peoples, the Alina, Shimyu and Druhyu, had reached Europe in course of time after the Dâsharājnya defeat. Here it may be noted that the original name Druhyu had become restricted, in the Rigvedic time itself, to only one of the many peoples who constituted the Druhyu group (that is, only to the Celts), and later became restricted to only the priestly class among them. The name Celt/Kelt is probably derived from “Kalatoya”, the name of an ancient people living either in south Kashmir, which was the Vedic heartland, or close to it to the south. Among the three Vedic peoples who reached Europe the Druhyus / Celts appear to have spread most widely, as their language Celtic was spoken in the last centuries before the Christian era over a wide area of Europe from Spain and Britain to the Balkans. That the Celtic priests retained the name Druid indicates that the mainline Druhyus probably functioned as the priestly class for the different Druhyu peoples, who collectively came to be called Celts. All these details leave no doubt that what we find in the Rig Veda and the Puranas is the actual recorded narration of the events leading to the dispersal of the Vedics from their Original Homeland in India right up to Europe.

➤ **Supportive Western Sources**

The Vedic/Puranic account given above is amply supported by Western sources. For instance, how widely the Druids/Celts had spread in various parts of Europe has been narrated at length by British-based Vedic scholar Anwar Shaikh in his book *The Vedic Civilization*. He writes: “People of Wales, Scotland, Ireland, Gaul (central France), Aquatain (south-central France), and the Belgae

in the north as well as in Helveth in present-day Switzerland, the Sequani and Lingones from the West, the Arreni in Auvergne, the powerful Aedni, between the Saone and Loire rivers, and the Bituriges along the Loire Valley are considered Celts. They are believed to have reached the shores of the Mediterranean later than other parts of Gaul.... During the Hallstatt period the Celts had marched from France to the Iberian Peninsula, the British Isles, and also to some extent eastward into Central Europe. Celtic bands also made their way into Italy.” These groups, known as Boii, Insubres, Lingones and Senones first arrived in the Etruria region of Italy, then came to the Adriatic coast, and reached Rome around 390 BC. The Celts also reached the Carpathians and the Balkans (south-east Europe), as later attested to by Roman historian Pliny. According to him two branches of Celts, namely, Bituriges reached northern and central Germany. Shaikh says there are (European) literary sources pointing to the fact that the Celts reached the Carpathians in the 4th century, later moving into Bulgaria, Rumania, Thrace and Macedonia, reaching Delphi in Greece in 279. He also says history shows the presence of Celts in Greece during the 3rd century BC. Shaikh also points to other socio-religious features of the Celtic people to reinforce his assertion that the Celts were Druhyus/Druids (he calls them Dravidians) from India. He says the Vedas generally apply the epithet god or goddess to large, useful steams. “It is the same wherever the Druids settled in Europe as Celts. For instance, in Ireland the rivers Boyne (derived from Bouvinda, “cow-finder”) and Shannon were regarded as goddesses.”

Other European scholars, reference books and even dictionaries contain similar referenes to the European spread of the Celts and their language. For instance *The Last 2 Million Years: the Reader's Digest History of Man* (London, 1974) says the term Celtic refers to the group of languages which survive today in the north and west of the British Isles and in France, Spain, northern Italy, and parts of Yugoslavia. In her book *Matter, Myth and Spirit*,

or *Keltic and Hindu Links* author Dorothea Chaplin is unsure about the Aryan origin of the Keltic people, but at the same time adds, "..... in which other direction can one find a clear explanation of fire worship, and of all the ceremonies appertaining to it? Where else are these functions described in detail at such an early date as that ascribed to the Rigved?" *Chambers Twentieth Century Dictionary* describes the Celts as "Aryan peoples, now represented by the Bretons, Welsh, Irish, Gaels, Manx." Bretons are the people of Brittany in France, Gaels are Scottish, and Manx are residents of the Isle of Man near the English coast. To this description *The Concise Oxford Dictionary* adds Cornish, the people of Cornwall in south-east England.

Along with such specific reference to Celts there are equally specific references to Druids in European works. For instance Dorothea Chaplin adds in her book mentioned earlier that the Celts were governed by a body of Druid priests, who framed laws for the benefit of the community. According to her the British Isles appear to have been substantially colonised by the Druids, who established great sanctuaries at various places in the British Isles and in Brittany (France); the main among them were at Stonehenge, Woodhenge, Malvern, Avebury, Mona in Anglesey, Tara, Iona, Callernish in the Hebrides (islands to the north of Britain), Stennish in the Orkney Island, and at Carnac in Brittany, France. The book *A Complete History of the Druids* says many temples of the Druids are still partly remaining in the Isle of Man near the English coast. In fact, commenting on the antiquity of the Druids in Britain this book says: "The Druids must have been there very early, since persons of indisputable learning have thought them to be of British origin. But this opinion has now been refuted....Dr. Stukeley says they first made their appearance from the eastern parts of the world about the time of Abraham." In Vol. II of *Asiatic Researches* Rev. Thomas Maurice says the Druids' 'Asiatic origin' "had long been an acknowledged point in the world of antiquities." He says Reuben Burrow, a great astronomer, strictly examined and compared the Druids' mythologies

and periods and “directly affirmed them to be a race of emigrated Indian Philosophers.” In Vol. VI, Part I of *Antiquities of India* Maurice calls the Druid priests “Brahmins of India, who spread all over north Asia, right up to Siberia,” and continued “their journey to the extremity of Europe”, finally establishing “the Druid, that is, the Brahmin” system in Ancient Britain. He concludes with the words. “This, I contend, was the first oriental colony in these (British) islands”. These ‘colonies’ may well be called kingdoms. For according to an article on Stonehenge by Prof. Harold Edgerton in *National Geographic* magazine (June, 1960), in the first century BC, Caesar found both Gaul (France) and Britain ruled by a Druid elite. To cap it all, Peter Ellis, in his study *The Druids*, writes of “the extraordinary parallels and similarities between the Celtic and Hindu cultures occurring in the areas of language, law, religious attitudes and mythology, music, and caste.”

➤ **Etymological Connection**

A minor but related point of interest here is – how did the Druids and the Celts come to be considered one and the same people? How did the two names Druid and Celt / Kelt become synonymous? There are three possible, but different, answers to this question. First, in his book *Aryan Invasion Theory and Indian Nationalism*, after identifying the Druhyus of the Dâsharâjnya battle with “the Druids (the ancient Celts)” Talageri explains his bracket thus: “Just as the name Puru was later applied to only one of the many peoples who constituted the Purus, while the other constituent peoples came to be known by other names (Tritsus, Kurus, Pânchâlas etc.), so also the original name Druhyu became restricted in the Rigvedic time itself to only one of the many peoples who constituted the Druhyus (that is, to the Celts), and in fact soon became restricted to only the priest class among them.”

Here Talageri says the Celts were a constituent of the Druhyu group of peoples, but does not explain the difference (and connection) between the two very different names. This explanation is broadly

(but not very clearly) available in the observation of Maurice in *Antiquities of India*, Vol. VI, Part I. Here he calls the Druid priests “Brahmins of India, who spread all over north Asia, right up to Siberia,” then gradually mixed with Celtic / Keltic tribes, that is, “Kalatoya people to the south of Kashmir,” and continued “their journey to the extremity of Europe,” finally establishing “the Druid, that is, the Brahmin” system in ancient Britain. Thus Maurice suggests a socio-etymological link between Celts / Kelts and the Druids. Significantly enough, as seen earlier, south Kashmir was a part of the Vedic heartland, which makes the Kelts / Kalatoya people inhabitants of the Vedic heartland itself or shows them as living just south of it.

While these two are what may be called ‘eastern’ explanations, there is a third, ‘western’, explanation, found in the *Chambers’s Twentieth Century Dictionary* of the English language. *Chambers* explains a ‘Druid’ as “a priest among ancient Celts....who worshipped under oak-trees”, and then mentions an etymology “from Celtic ‘derw’, an oak, which is from the same root as Greek ‘drys’, an oak.” This etymology may possibly have been based on the fact that an oak tree is as ubiquitous in the west as the holy *Vata Vriksha*, a banyan tree, is in India in particular and south-east Asia in general. The oak is a tree of about 300 species, among which the British oak is the most famous. *Chambers’s* dictionary thus argues that the Celts and Druids are so closely connected because the very word ‘Druid’ has a Celtic origin, not a Vedic origin. On the other hand there is already an etymology saying ‘Celtic’ / ‘Keltic’ itself has a Vedic origin.

➤ Exercise in Chronology

After the etymology, the chronology. When did the Druhyus arrive and spread in Europe? The answer can at best be a tentative exercise in chronology. In fact tracing the time-frame of the worldwide migrations of the Vedics would be a fascinating exercise if it were not so frustrating. For the chronology of ancient events anywhere is notoriously hazy, and can go wrong by centuries, if not by millenniums.

According to Puranic history the first westward migration of the Druhyus took place in the wake of their defeat in the war with the Ikshvâku king Mândhâtâ. In his book *Bharatiya Sanskritichâ Vishwa Sanchâr*” (Marathi) Dr. Hebalkar puts Mandhata’s period at around 8000 years ago (but he does not quote supporting sources for this estimate). The second battle in which the Druhyus who stayed back were defeated was the *Dâsharâjnya*, the ‘Battle of Ten Kings’ with Tritsu king Sudâsa. In his book *India in the Vedic Age* P. L. Bhargava states that this battle took place in 2250 BC, that is 4250 years ago. Acceptance of these two dates would mean a long period of nearly four millenniums had elapsed between the two wars. But how acceptable are they? Could it not be that the intervening period was not 4000 but 400 years? By a quirk of history, the dating of these two wars becomes possible with the help of the date of a third war – the Bhârat war. The traditional date of the Bhârata war in 3101 BC, and as it has been corroborated by independent evidence it has become the acceptable date among scholars. With this date in mind it would be helpful to look at the extensive royal genealogies given in the Puranas and go backward in time with the help of the consolidated table in Bhargava’s book. The time of the Bharata war was the time of Kuru king Dhritarâshtra, as also of Krishna, who was a contemporary and close relation of the Kauravas / Pandavas. In P L Bhargava’s table in *India in the Vedic Age* of a hundred Puranic kings Dhritarashtra is the last, at no. 100. So Dhritarashtra’s date was 3100 BC. Going backward in time, Rama is at no. 72, Sudâsa is at no. 39, and Mandhata at no. 21. Calculating at 20 years per generation (as Dr. Waradpande does) this would mean Rama lived 600 years before Dhritarashtra / Krishna, Sudâsa lived 600 years before Rama, and Mandhata lived 400 years before Sudâsa. This in turn means the Druhyu-Sudâsa battle was fought in 4300 BC, and the Druhyu-Mandhata battle was fought in 4700 BC. All this is admittedly an approximation, but it seems nearest to Puranic history.

These figures indicate that the Druids' first westward migration took place during the centuries after 6700 BP (Before Present). These Druhyus were a segment of the Vedic Druhyu society, and they settled in Afghanistan. After 6300 BP there was another migration, and this time probably even those Druhyus who had settled down in Afghanistan moved ahead and spread to the north and the west, finally arriving in Europe. Arriving when is not known, but it would be reasonable to assume that they may have done so during some centuries after 4300 BC. The fact that the Celtic/Druidic language was spoken widely in Europe till some centuries before the advent of Christ would mean that the Druids / Celts had not only reached but had spread and settled all over the continent long before, and the Vedic culture and religion they took with them had held sway for ages. In fact, even in Britain, the western extremity of Europe, they were so old that there were scholars who held that it was their original homeland.

➤ Other Vedic Migrants

In addition to the Druhyus / Celts there were also other Vedic communities that migrated to Europe in the ancient past. As already stated, Talageri has pointed out that besides the Druhyus, two other peoples participating in the Dâsharâjnya can be identified as migrants to Europe. These are the Alinas, identifiable with the Hellenes (the ancient Greeks), and the Shimyus, identifiable with the Sirmios/ Srems (the ancient Albanians). After the Rig Veda and the Puranas, later scriptures have also endorsed the migration of ancient Indians to various parts of the globe, including Europe. These include *Manu Smriti*, *Mahabharat*, and *Aitareya Brâhmaṇa*. Reputed Scandinavian Indologist Count Biornstierna says in *The Theogony of the Hindus*, "It appears that Hindu settlers migrated to Scandinavia after the Mahabharat war." Apparently in the same period Rome and Romans were also known to ancient Indians. This can be seen from the word *Romaka* in Apte's Sanskrit lexicon, where its meaning has been given as the city and citizens of Rome. There is also a

reference in Sabha Parva of Mahabharat that says 'Romakas' had come with gifts when Yudhishtira performed a Yajna on ascending the throne of Hastinapur at the end of the Bharat war. This reference is 5000 years old. On the other hand, according to PN Oak, in the battle of Ipsus (301 BC) between Cassander and Antigonas, Cassander won a memorable viatory due to his India-trained elephant force. Again according to Oak, the Procurator (financial officer) of the Roman empire in Britain by name Julins Classicianus had an Indian wife called Julia Pacata Indiana. Around the same time the Celts were still moving across Europe, for two branches of Celts had reached north and central Germany around the 4th century BC, says Anwar Shaikh. In an allegorical account the Mahabharat says the Puru king Yayâti had banished his sons, Anu, Druhyu and Turvasu, and among them the descendants of the banished Turvasu were the Yavanas. The Yavanas are generally identified with the Ionian Greeks, as the name Ionia is derived from Yavana. Here it may be noted that in Bhargava's genealogical table Yayâti is at no. 6 as against Mandhata at no. 21. That means Yayâti antedates Mandhata by 15 generations, that is, about 300 years.

➤ **Europe's Racial Memory**

All these Vedic settlers apparently stabilized in Europe's racial memory as their Aryan ancestors. For instance, Irish President De Valera once observed, "The Irish people have come from the eastern cradle of the Aryan race." Specifically, the Irish claim that their ancestors came from north India and Iran, according to *India Abroad*. The book also says the official name of Ireland is Irin, a derivation from Aryan. The name is also considered to denote Aryan Land. During a visit to the national library in Dublin Bhikshu Chamanlal, author of celebrated works like *Hindu America*, came across an old book titled *Land and Mystic Charms of Ireland* by Lady Wilde, published in London in 1859. Its preface says:

"The present work deals only with the mythology, or the fantastic creed of the Irish respecting the invisible world, strange and mystical

superstitions, brought thousands of years ago from their Aryan home, but which still even in the present time affect all the modes of thinking and acting in the daily life of the people.”

As for the Indian ancestry of the Greeks, which the Puranic evidence already adduced clearly shows, there are many authoritative Western sources that support it. For instance, in his reputed work *India in Greece* Pococke writes that “a seafaring people, active, ingenious and enterprising” lived “at the mouth of the Indus”, who emigrated to the “far distant climes of Greece”. According to PN Oak these ancient Indian seafarers reaching Europe were not only traders and scholars but also included soldiers of fortune. He writes in *World Vedic Heritage* that Indian soldiers fought in Xerxes’s army in the 6th century BC, and Hannibal’s elephant corps was from India. In the first century BC the Caesars of Rome also had an elephant brigade managed by Indian *Mahouts*. One such contingent took part in Caesar’s landing in Britain. A museum in Britain has a first century AD statue of an Indian cavalryman bearing the inscription : *Danniens equasala Indiana TVR Albani* – “Indian trooper Dannica of the ala Indiana, of the Regiment Albanus.” He had served for 16 years when he died in England.

Ancient Indian migrants going west first founded kingdoms in Egypt and Abyssinia, and “centuries subsequently to this colonization spread the blessing of civilization over Hellas and her islands”. In a similar vein Leonard Cottrell, a western scholar, opines, as quoted in *India Abroad*, that the establishment of ‘Indo-Aryans’ in Greece, Syria and Egypt were all waves of one big westward movement of Indo-Aryan peoples, extending over several centuries. He says the Greeks always looked to the East for their old home.

There were ancient Hindu colonies in Greece, and there are records of Indians visiting Athens in the fourth century BC, and even earlier. It is also claimed that the Greeks of the ruling class in Hellas were apparently direct descendants of the Aryan conquerors. Repeating the same fact more assertively, *India Abroad* says, “The

early civilization, the early arts, the undoubtedly early literature of India are equally the civilization, the arts and literature of Egypt and of Greece, for geographical evidence conjured up to historical facts and religious practices now prove beyond all dispute that the latter countries are the colonies of the former.”

Among other areas of the globe ancient Indians had reached, Russia is an interesting example, for descendants of Indian communities that had migrated to and settled down in the south Caucasus region of Russia long ago are still found to be living there. Artefacts dating from those times that have been found in Russia and preserved in Russian museums include bronze axes on which birds and plants found only in India are carved, as well as elephants, although elephants do not breed in Russia.

What could be called the last and the latest mass migration of Indians to Europe in olden times was that of the Gypsies. The nomadic European community known as Roma Gypsies are Indians who migrated to various countries of Europe about a thousand years ago. Agnes Vrancky *alias* Bibi Anisha, former Secretary General of the World Romani Union, stated during a visit to India in 1994 that linguistic, ethnic and anthropological studies have made it clear that India was their homeland, and they all “accept their Indian origin”.

There are about one and a half crore Roma people in various European countries, such as England, France, Germany, Sweden, Spain, Greece, Bulgaria, Romania etc. They are now known by different names in different countries, such as ‘Gypsy’ in England, ‘Manus’ in France, ‘Gitano’ in Spain and so on. Roma (or Romany) fables about the last Gypsy king of historical times are strikingly similar to the story of Prithviraj Chauhan.

In fine, the hoary history of Europe was made by *people* from India, who migrated to that continent since Vedic times and other ancient periods.



2. Religion

VEDIC INDIANS civilized Europe. The instrument they used for the purpose was the religion that they took with them. As the Vedics, led by the Druhyus / Celts, arrived in Europe in migratory waves over the centuries and spread and settled in large parts of the continent, the civilizational influence their religion wielded on the natives became a dominating factor for contemporary European society. And this influence, which began with the primal Vedic religion, was also present during the much later period of evolved Hinduism. For while, on the one hand, Vedic gods like Shiva and Surya became established, albeit under distorted or different names, in European religion and mythology, on the other hand chronologically much later Gods like Rama and Krishna were also worshipped. What is more, in course of time the Vedic gods who reached Europe were transformed into various local deities, having their own names and requiring their own religious rites, in different European countries.

A notable constituent of this Vedic pantheon abroad was the Fire God. Worship of fire was a fundamental aspect of Vedic religion and ritual, and, as is well-known, this was the major component of Zoroastrianism in Aryan Iran. At the same time, as Macdonell points out, sacrificial fire was also an “institution” among Europeans, especially the Greeks and the Italians. The Teutons and the Slavs also worshipped fire, offering sacrifices to the Gods in fire. In fact the Slavs worshipped fire under the same Sanskrit name Ogon (*Agni*).

All in all, religion from India grew profusely in the soil of Europe, satisfying the spiritual needs of a continent standing on the threshold of civilization. Its appeal was penetrating, pervasive, and enduring, because this appeal did not stop at reverence for and worship of particular deities, but touched the heart, the intelligence, and the soul.

In the belief that the various forms the Vedic religion assumed for ancient Europeans were different oriental religions, Cumont analyses the cause of their wide spread thus: “These religions represented a more advanced type in the evolution of religious forms. They gave greater satisfaction to the senses, to the intelligence, and lastly to the conscience. They taught man how to reach a blissful state in which the soul was freed from bodily tyranny and suffering, through contemplation and the artistic aids of music and dancing. Compared to the infantile nature of the prevailing religion, they were sacerdotal, prescribed rituals, penances and purifications, asceticism; compared to the prevalent vague and unenthusing notions, they offered a definite view of after-life, survival of the soul, and the attainment of happiness. They thus offered greater beauty of ritual, greater truth of doctrine, and a far superior morality.”

➤ **Shiva in Europe**

Among the Vedic gods who brought about this spiritual elevation of ancient Europeans the one with probably the most prolific presence

was Shiva. Anwar Shaikh asserts that statues of Shiva were taken to various parts of Europe by Vedic Indians reaching the continent. This assertion is supported by the fact that traces of Shiva worship are found in various European countries, such as Italy, Poland, Denmark, Britain, and the Netherlands. Shiva was worshipped in ancient Rome. An old idol of Shiva wearing a garland of human skulls has been discovered in the Netherlands. The Shiva Linga was also worshipped widely in Europe since ancient times. In Italy a Shiva Linga has been found that is 5000 years old. It is kept in the Etruscan Museum in the Vatican. Another Shiva Linga, 4000 years old, was found on the island of Corsica in the Mediterranean Sea. Yet another Linga, shown coiled with cobras, was found in Britain. In Denmark a Shiva Linga made of wood was discovered. In Sweden an 800-BC-old ithyphallic deity (strongly suggesting Shiva with Linga) was found. In Poland farmers used to prepare a Shiva Linga and perform ritual worship with milk poured on it.

Many other instances of the widespread presence of Shiva and Shiva-Linga have been given by P. N. Oak in his tome *World Vedic Heritage*: A railway junction called Sable in France was probably raised around a Shiva temple. The ancient shrine is now kept locked, but, says Oak, the late Dr. V. V. Pendse, founder of the well-known Dnyâna Prabodhini institution of Pune, saw, during a visit to France, clear signs of an uprooted Shiva Linga through a barred window. According to a paper read by James Todd at the Royal Asiatic Society of Great Britain in 1830 a gold ring found at Montrose in Scotland has a Shiva-Linga mounted on it. West Germany had issued a 30-penny postage stamp showing a “cult object” excavated in the city of Schifferstadt. It looks remarkably like a Shiva-Linga. Oak personally identified at least two mosaics of Lord Shiva, found in Great Britain, on display in the British Museum in London. One shows a bearded figure holding a trident, the other riding a buffalo. Relics of Shiva worship have also been found in Scandinavia. Oak also cites two curious, albeit indirect, instances

related to Shiva. First: “Listed among the publications of the Druids in Britain is *Shiva Samhitâ*, exactly the same title of a Hindu scripture. It is now a small booklet in English. The Second: The mythological story of Lord Shiva burning Kâmadeva, God of Love, has survived in Europe in an annual ritual called lighting Ballentyne fire. In ancient England, says Oak, both Shiva worship and recitation of the Gayatri Mantra were prevalent. Shiva, in general, was widely worshipped in Europe in the original Hindu form as well as, later, in his Greek and Roman adaptations. Shiva’s divine consort was also not unknown. Dorothea Chaplin suggests that Chaurikirk, the old name for Elgin Cathedral (is) “possibly from Gauri”, the goddess-wife of Shiva.

➤ Celtic ‘Pashupati’

The ‘Pashupati’ aspect of Lord Shiva was also not only known but widely and highly revered in Europe. In fact this form of Shiva directly links Celtic Europe with the Indus/Vedic civilization. An ancient seal has been found in the Indus Valley showing a three-faced deity, wearing a horned headdress, seated on a throne in a Yogic posture, and surrounded by animals. This is Lord Pashupati, the God of Animals, an epithet of Shiva. Remarkably similarly the Celts too had a god wearing the horns of a stag, and known as Cernunnos. This name reveals that it was the same Vedic deity, Lord Pashupati Shiva, who travelled *via* the Zoroastrian theology of Aryan Iran to the Celtic pantheon in Europe. For one of the deities to whom Rigvedic prayers were offered was Sharva, an epithet shared by Shiva and Rudra when the two were separate divinities. The Zoroastrian scripture *Vendidad* also refers to a deity called Saurva, associated with Asuras. God Shiva was always worshipped by Asuras. And then, originating in Rigvedic India as Sharva and appearing in Aryan Iran as Saurva, Shiva arrived in Celtic Europe as Cernunnos. Thus the transformation of the central theme of ‘Lord of Beasts’ seems to have progressed from Sharva in Vedic Sanskrit to Saurva in Avestan to Cernunnos in Celtic. An image of the Harappan ‘Pashupati’ seal has also been

found on what is called the Gundestrup Cauldron. It is Shiva, found seated in his Yogic position, wearing horns of a stag and surrounded by animals.

Shiva is commonly called Mahadeva, Great God, by Hindus, and Cernunnos too was considered the greatest of gods, particularly in Ireland, where he was also locally known as Lug Lamfota, that is, God Lug of the Long Hand. Interestingly enough, this epithet has a striking resemblance to Prithupâni' ('of the large hand'), an epithet applied to another Vedic deity, the Sun God Savita.

Outside Ireland Lamfota was also known by the same name in several cities of Europe, which are actually named after him, like Lyon and Loudon in France, Leiden in the Netherlands, and Leguica in Poland. The deity's name also underwent variations due to local differences of language and pronunciation, as is seen in the dedication inscriptions found in various places in Europe. For example, in Switzerland he was called Lugues at Avenches, Lugouibus at Asma, and Luguei at Pealba de Villestar. In Ireland itself Lug Lamfota was also known as Samildanach – an Indian-sounding name. Lamfota was a major deity for the ancient Irish, and his celebration, which was regularly held, is still observed in Ireland as 'Garland Sunday'.

A very ancient cult of the 'God with the Long Hand' seems to have existed in Sweden too. While in one of his Swiss names the god was dedicated by the guild of cobblers, a Swedish effigy of his is even today called 'the cobbler'. Apparently, Lug of the Long Hand was the patron deity of cobblers of ancient Europe. Like Trimukha Shiva, as depicted on the Indus seal mentioned earlier, the Irish Lug of the Long Hand was considered a triple-headed god on the continent.

Elsewhere in Europe a pre-Roman Hindu shrine has been unearthed by archaeologists in Croatia. The site, found deep inside a cave, dates from the 3rd century BC and is believed to be a shrine of the ancient Illyrian people. A huge phallic stalagmite found in the

cave may possibly suggest a Shivling. A Minister of the Government of Croatia visiting India some years ago even claimed that Croatia is mentioned in the Vedas. According to Babarao Savarkar in *Khrista Parichay* (Marathi) archaeologists have found remains of more than 150 large Hindu temples in Europe. They were built of wood during the period around 4700 BC.

➤ **Greek / Roman Adaptations**

As pointed out earlier, a remarkable result of Hindu deities reaching foreign shores in the hoary past was that over the millenniums they underwent local adaptations, and we saw how Vedic Shiva went through this process in Celtic Europe. Much later, this Vedic God was further transformed into a god of Greece, as well as, still later, of Rome. The Greek cult of Dionysius, which later became Bacchus with the Romans, is an offshoot of Shaivism. The Greeks spoke of India as the sacred territory of Dionysius, and even historians of Alexander the Great identified the Indian Shiva with Dionysius. An interesting footnote worth adding here is that ancient deities of Greece were armed with Trishul, the weapon of Lord Shiva.

The Egyptian goddess Isis was later also worshipped in Greece and Rome. She has been described as “the goddess who raises the sun from death and puts him again in the eastern sky.” So most probably *Isis* was *Ūshas*, the Vedic Goddess of Dawn. It was Isis worship that later led to Mithraism (Sun worship) which spread all over west Europe. There were beautiful Isis temples all over Europe, which the early Christians destroyed.

Among other Greek deities, Raghunandan Prasad Sharma says in *Vishwavyâpi Bharatiya Sanskriti* (Hindi) that Pluto and Apollo are very similar to Yama and Krishna. Pluto was the God of Death, and his terrible aspect is envisaged in the same way as that of Yama, the Hindu God of Death. And Apollo is a shepherd, has a musical instrument in his hand, and has killed a terrible serpent. All these are aspects of Krishna as a child. In fact, Oak says Krishna “was one of

the chief deities worshipped in Greece.” Even the bull, Lord Shiva’s mount worshipped as Nandi, was sacred for the Greeks. He was not to be killed, and anyone doing so could be sentenced to death. *Yajna* (sacrifice), the focal feature of the Vedic religion, also prevailed in ancient Greece. At the beginning of every month leaves of certain trees were offered into a sacrificial fire. In ancient Athens cooked food items were also offered. (*Greek Votive Offerings*.)

There is also a religio-linguistic link. Max Muller in his *Science of Mythology* writes, “We may....prove from such equations as Sanskrit *Dâtâ Vasunâm*, Zend *Dâtâ Vahunâm*....and Greek *Doter Eاون* (“giver of gifts”) applied to the Devas, that such whole phrases... had been formed by the Aryans in their undivided state... and preserved as historical heirlooms....” In other words, it is certain that there was a time in remote antiquity when Indians, Iranians and Greeks were living together.

➤ **Hindu Greeks**

To this description of Greece-India linkage may be added an interesting footnote. During the period of Greek domination of north-west parts of India (including Afghanistan) there were Greek governors of those territories who not only minted coins with Hindu motifs but became Hindus themselves. According to the Brâhmi inscription on a pillar dated c. 150-100 B.C., it was a “Garudadhwaaja” of “Vasudeva (Vishnu)” erected by “Bhâgavata Heliodorus”, Greek ambassador to Vidisha. In the caves of Nashik and Karla in Maharashtra also there are a number of epigraphs recording religious gifts by Buddhist donors. Some of them called themselves ‘Yavanas’ (most probably Greeks) but had Hindu names, such as Indrâgnidatta. Greek coins of this period also reveal distinct Hindu influence. Some coins of Eucratides, Antialkidos and some other Greek rulers, show an enthroned deity with an elephant in front.

Oak also says excavations in Italy have unearthed many painted greyware jars on which scenes from Ramayana are drawn. For

example, there are pictures of the hostility between Vâli and Sugriva and of Lakshmana showing his anger at Sugriva etc. These artefacts are said to be dated between 6th century BC and 2nd century AD. They are kept at the Etruscan Museum at the Vatican.

Hindu Deities : Ancient Italians were polytheists and used to build temples for their deities. As stated earlier, there were hundreds of temples of the Roman god Mithras (Vedic Sun God Mitra). God Janus / Ganesh of the Greeks was also worshipped in ancient Italy. In his book *Studio Pontica* St. Augustine describes a grotto near a place called Trapezus which was formerly dedicated to God Mithra but has now been transformed into a church. According to RP Sharma, there are also some similarities between Jupiter and Indra, Juno and Parvati, and Minerva and Durga.

“Roman soldiers learned to revere Ma, the great goddess,” writes Franz Cumont in *Oriental Religions in Roman Paganism*. Mā is another name for Lakshmi, Hindu Goddess of Wealth. There is also an Italian version of the Flood (*Pralaya*) legend. The Hindu holy symbol Swastika is found carved on a Roman golden dinner set, which is on display in the British Museum in London.

On the religio-social level, ancient Italian customs governing marriages had a number of similarities with Hindu customs. There were also Italian versions of the Hindu rituals for occasions like birth, naming ceremony, funerals, even *shrâddha*. As in India, there were four broad social categories – priests, senators (rulers), patricians (noblemen) and plebians (commoners). The fire lighted by priests was considered sacred, it was not to be used for common purposes. The daily Roman routine had fixed times for worship or sacrifice. Before a meal some cooked food was offered into the sacrificial fire kept in the home.

According to Oak an ancient region of Italy known as Etruria had a developed civilization during the period 13th to 7th century BC, and the people were known as Etruscans. They used to worship

the Shiva-linga. They also worshipped trees, and they practised cremation of dead bodies.

Ramayana Pictures: An Indian who had visited Italy about a decade ago told well-known religious personality Mahant Nityagopaldas about two old pictures that had been found there some years ago. One of them showed two men and a woman walking in a forest, while in the other two boys had caught hold of a horse and were dragging it along. According to PN Oak experts from various countries failed to understand what the pictures showed; finally, at the request of the Italian government the government of India sent a south Indian scholar, who could immediately know that the first picture showed Rama, Lakshmana and Sita going for *Vanavâsa*, while the other showed Rama's sons Lava and Kusha seizing the horse of Rama's Ashwamedh Yajna.

Germany

Celts: Two branches of Celts had reached north and central Germany around the 4th century BC, according to Anwar Shaikh. This is proto-history. An ancient European people called Saxons, who once ruled parts of Britain, originated in a region of Germany called Saxony. According to Tod, the Saxons must surely have come into contact with Hindus and Hindu beliefs, for some pictures in ancient churches in England look very much like Krishna and the Gopis. According to Greek historian Tacitus ancient Germans worshipped natural phenomena and forces like the sun, moon and fire, like the Hindus, practised cremation of dead bodies, a hoary Hindu practice, and even had the Hindu 'Sati' tradition. Wrote Tacitus: "The first habit of the Germans on rising was ablution, which must have been of Eastern origin and not of the cold climate of Germany, as also the loose flowing robes, the long and braided hair tied in a knot at the top of the head so emblematic of the Brahmins." (James Tod, *Annals and Antiquities of Rajasthan*.)

Roman emperor Julius Caesar, on conquering Germany, France and England during 58 and 50 B.C., wrote a memoir describing the

people of these territories, which has been published in many European languages in modern times. In it he wrote that the people there believed in the immortality of the soul and its transmigration. This is a fundamental tenet of Hinduism.

➤ **Spain**

In the year 1993 the US media reported that the Golden Gate Park in San Francisco contained a Shiva-linga in the form of a four-foot-high 800-pound granite rock, which Hindu devotees were worshipping. The report said : "The Lingam, some say, emerged from Spanish history dating to the 12th century, because in 1931 the San Francisco newspaper-baron William Randolph Hearst dismantled the Santa Maria monastery in Spain and shipped it to San Francisco. He wanted to rebuild it but ran out of funds. Later he donated the stones to the park. Many were stolen by looters. In 1988 the remaining stones were arranged in a rock garden, with the Lingam erected as a road barrier." Thus the Shiva-linga was found in a Christian monastery in Spain.

➤ **Denmark**

Denmark's Hindu history stretches back to the BC period, for a relic showing the Sun God riding a chariot, dated c. 1500 BC, has been found in that country. Another ancient link is the 'Gundestrup Cauldron', a richly decorated silver vessel, dated between 200 BC and 300 AD, that was found near a village called Gundestrup in Denmark. A beautiful work of art, inlaid with gold, and even glass for eyes, it is now housed in the National Museum of Denmark in Copenhagen. The carvings on the Gundestrup Cauldron include an image of the Harappan 'Pashupati' seal. It is Shiva, seated in the Yogic position, wearing the horns of a stag and surrounded by animals (*pashu*).

➤ **Sweden**

The very name of this country provides a Hindu link. In the Swedish language Sweden is called *Swerga*, a clear derivation of

the Sanskrit *Swarga*, Heaven. And it appears to have been a land of temples and sacred trees. For Laura Elizabeth Poor writes in *Sanskrit and its kindred Literatures, Studies in Comparative Mythology*, “The temple of Norsemen was at Uppsala; the grove that surrounded it was sacred.” Here it needs to be understood that although the term ‘Norsemen’ generally means Norwegians, it was also applied to all ancient Scandinavians, including Swedes. Hence the reference to the temple in Uppsala, a city in Sweden. A rock carving of a sun disc has also been found in Sweden.

➤ **Iceland**

There is a small island between England and Ireland by name the Isle of Man. About it Dorothea Chaplin writes : “Prof. WA Craigie of St. Andrew’s remarks of the Isle of Man, called Mon in Iceland, that it has for the genitive Manor, and that the mutation may imply an original nominative, Manu, whence the genitive Manu of Gaelic names. Thus the central point in Iceland appears to be the mythic figure of the great Hindu law-giver as in the Isle of Man and some districts of the British mainland.” It is significant to note here that in the Irish language the name of the Isle of Man is ‘Manu’. PN Oak holds that there are Sanskrit-based words in the Icelandic language.

➤ **‘Mitra’-worshipping Roman Empire**

After Shiva the other Vedic deity that appeared on the religious scene of Europe probably much later but spread far wider was Mitra, the Sun God. In his monograph *Sun Worship in Indian and other cultures* Dr. M. D. Paradkar gives extensive information on how the Vedic worship of the Sun had spread to almost all countries of the ancient world, including those of ancient Europe.

Mitra, pronounced Mithra in Avestan, occupies an important place in the Zoroastrian pantheon. From Aryan Iran Mithraism spread to Asia Minor, where the Greeks had settled after they were separated from their Vedic brethren about 5000-4000 BC. They “appear to have moved westward and followed the worship of the

Sun-god, the pre-Christian religion called Mithraism....” (S. D. Kulkarni, *Beginnings of Life, Culture and History*.) Sun-worship became a prominent religion in Greece, and Greek art was enlisted in its service; it is responsible for creating Mithraic sculptures throughout Europe. The name of the Greek city Heliopolis means the City of the Sun.

Plutarch holds that the cult of Mithra was brought to Rome by Sicilian seafarers in 67 B.C., but the earliest Mithraic inscription found in Rome dates to the period of the Flavian Dynasty. (*Encyclopaedia of Religion and Ethics*, James Hastings.) Hastings says the diffusion of Mithraism in Rome was done by the army, the slaves, and also with the help of trade contacts. According to Paradkar, during the Parthian wars under Nero and Claudius a considerable oriental element had entered the service of Rome as auxiliaries, and this was responsible for spreading the religion in the West. However, Sun-worship had clearly attained high status by this time, because Nero was not only probably the first Roman emperor to be officially initiated into Mithraism, but had even had a huge statue of himself set up for being worshipped as the Sun God.

The rich and varied symbolism related to the Roman Mithra is clearly of Vedic origin. In the Hadrian Wall relief Mithra has been shown as born from an egg, surrounded by the signs of the zodiac. This is a clear parallel to the Sun as *Hiranyagarbha*, ‘Born of the Primordial Egg’ in the Vedas. Further, Mithra was generally worshipped in a natural mountain cave by the side of some running water. Corresponding references to *Parvata* and *Salila*, rock and water, are common in the Vedic description of Mitra and Savita. The main sacramental form of Mithraism was offering water oblations to the Sun God, exactly as traditional Hindus do.

The central act of worship in Mithraism was the sacrifice of a bull, because the chief exploit of God Mithra himself was the slaying of the Bull, evidently symbolising the seasons. This is shown in reliefs and drawings on surrounding walls of almost every Mithra shrine.

At least twelve such cave shrines have been located, where various episodes related to Mithraic mythology are represented. Among them the presence of a crow as a heavenly messenger is another feature of Mithra iconography. The symbolism of *Vāyasa*, crow, and other birds with the Sun is found in the Vedas. Mithra is also described as carried in a chariot driven by a solar deity, other than Mithra, namely, Helios-sol, the light-giving charioteer. He may be the counterpart of the Vedic Aruna. The time of the day when there is light before sunrise, *Suryodaya*, is known as *Arunodaya*. Then there is a dog, depicted as a faithful companion of Mithra. He may be compared to *Saramâ Devashuni* in the Vedas.

In the capital of Rome shrines of Mithra worship were established on the northern slope of the city. The pictorial representations in Mithraic monuments particularly relate to the phase when Mithraism in Rome developed into what can be called a “solar pantheism”, which became the official religion of the Roman State under Aurelian. There were more than a hundred Mithra temples all over the city in the second and third centuries A.D. GSR Mead observed, “Mithraism had spread like wild fire throughout the Empire in the first four centuries A.D.”

During this period Mithra was invoked in treaties made by Roman rulers, and altars dedicated to the deity were erected by contending rulers. One such altar is dated 307 A.D. The latest inscription in which Mithra was named belongs to 385 A.D. Julian was the last Roman Emperor who followed Mithraism. He had composed a ‘Hymn to the Sun’, and glorified Mithra by referring to all other gods as different aspects of Mithra’s might.

Mithraism occupied a position of privilege till the victory of Constantine and his ‘vision’ of Christ proved the turning point. Actually this so-called vision has a dark history. During Constantine’s time the Roman Empire was breaking down, so Constantine, a ‘pagan’, converted to Christianity virtually on his death-bed in order to use the new, spreading religion as a tool of Roman imperialism. (This

history repeated itself exactly when Mohammed used his newly-founded religion of Islam as a tool of Arab imperialism.) 'Christian' Constantine's victory inaugurated an era of Christian fanaticism. Mithra worship was banned, Mithraic monuments destroyed, and priests and followers of Mithraism massacred. By about 400 AD Mithraism began to fade out. However, there are still some Mithra temples and frescoes in Rome that escaped the Christian iconoclasm of the 4th century AD. In Pompeii, the Roman city suddenly buried in 79 AD under molten lava from the volcano Vesuvius, excavations have unearthed many treasures, one of which is a medallion depicting the image of the Sun God.

Away from Rome, in Europe there are about 500 sculptures and 400 inscriptions that survived destruction. These are found in countries extending from Britain to Hungary, and are especially numerous in Germany. There is abundant evidence showing that temples to the great god Mithra (the Vedic god Mitra) were being raised in Europe right up to the end of the Roman era. They have been found in Germany, Spain, and many European ports. A relic showing the Sun God riding a chariot (dated c. 1500 BC) was found in Denmark. In Sweden a rock carving of a sun disc has been discovered. Even in the extreme north of Europe, in the Lapland region of Scandinavia, a branch of the Finno-Ugrian people offered special oblations to the Sun God at sacrificial feasts.

In pre-Christian Britain and Ireland 'the cult of the Sun' was quite in vogue. Half a dozen Mithra temples have been excavated here, three of them by Hadrian's Wall built by the Romans as a fortification during their rule. A beautiful temple was also discovered about a hundred years ago in an underground grotto at Margate in Kent. It was probably dedicated to the Sun God or to Lord Vishnu. A large conch is depicted in the four corners of the shrine, a typical motif related to Vishnu.

In 1954 a Mithraeum (Sun Temple) was unearthed in the very heart of London, as also a Mithra statue in 1967. In his book *The*

Roman City of London Ralph Merrifield says an excavation carried out in 1889 on the site of a temple to Mithra produced a rich haul of antique marble sculptures. About one of the three temples found near Hadrian's Wall that was discovered in the 19th century E.F. Lincoln says in *Britain's Unwritten History*, "This temple of Mithra at Homesteads is a commentary on the strength of enthusiasm for the Mithraic cult, and an eloquent though silent testimony to the way in which the cult swept across Europe from one end of the empire to the other."

➤ **Stonehenge**

Among shrines to the Sun God in ancient Europe that far pre-date Roman Mithraism, arguably the most famous is Stonehenge in England. Carbon-dated as being about 4000 years old, many archaeologists believe that Stonehenge was precisely oriented toward Summer Solstice (June 22), that point on the horizon at which the mid-summer sun rose. The shrine consists of two arrangements of huge slabs of stone – a circle of about 100 feet in diameter that once held 30 columns, and an inner horseshoe of even grander blocks, some 20 feet tall and weighing more than 40 tons apiece. Within the horseshoe is a great slab, the 'altar stone'. The whole structure is encircled by earthwork in a ring 320 feet in diameter.

For visitors still thronging to Stonehenge, it is an engineering marvel. Some of the huge boulders with which it is built were 24 miles away from the site, while some others, weighing 4 tons apiece, were brought by land and sea from 250 miles away. Antiquarians believe that as many as 1500 men could have laboured for 10 years transporting all the immense stones to the site of the shrine. These stones were precisely shaped into rectangular slabs, some of them weighing 50 tons each, despite that the type of stone selected for construction is harder than granite and can quickly blunt even steel-alloy chisels. Yet without the use of metal tools, which were unknown, they were so finely formed and so accurately placed even in high

positions that during a partial restoration in 1958 it was found that “even with modern machines, workers found the stones difficult to adjust with a 60-ton crane.” (*National Geographic* magazine, June 1960.)

Here, at Stonehenge, 4000 years ago the Druid priests of the Celts used to gather at break of dawn on the solstice day, face the East and, says Oak, invoke the rising sun to ‘energise our intelligence’ – just like the Gayatri Mantra : *Dhiyo yo nah prachodayât*. What is most remarkable, Druid priests, clad in flowing white garments, still come to Stonehenge and perform solstice rituals in the presence of a throng of visitors.

There is also another similar pre-historic temple-site, located in Wiltshire, which is said to have been much larger than Stonehenge. It once had 650 giant stones forming a huge circle around an artificial hill. Over the years, however, its stones have been broken up for construction, with only 20 left standing.

The Stonehenge temple was apparently much more than a temple. For according to British astronomer Gerald Hawkins it was actually a giant three-dimensional stone computer, erected at the beginning of the third millennium BC, which made it possible to precisely calculate the solar solstices and equinoxes as well as extreme positions of the moon. (G. S. Hawkins, *Stonehenge Decoded*.) In very recent times a laser-scan survey of Stonehenge has discovered more than 70 previously unknown Bronze Age carvings on five of the giant stones, showing axe-heads. According to press reports from London in October 2012, “the revelations are likely to be of huge importance to archaeologists’ understanding of a key part of Stonehenge’s life as a prehistoric temple.”

Apparently this Vedic link of England continued in Puranic times. For according to a book titled *A Comple History of the Druids* there is evidence showing that a huge image of Lord Vishnu reclining on the coils of a gigantic cobra had been erected in ancient times in

the Isle of Anglesey in Britain. Some of the huge boulders used for the cobra's coils are said to still stand at the spot. There is also Ganesh. A grotto in Margate contains representation of Ganesh, says Dorothea Chaplin. A book titled *British discovery of Hinduism* contains a picture of Ganesh as an illustration for an essay by William Jones.

Another well-known temple existed on a hill called the Hill of Tara – a significantly Sanskritic name. Yet another temple, 5000 years old, was discovered in 1997 A.D. in Somerset. To cap it all, in his book *Megalithic Software* an American professor by name Lyle Borst adduced proof that even the Westminster Abbey and St. Paul's Cathedral in London are built on sites of ancient sun and moon temples respectively. Oak adds that an idol of the Vedic Sun God was found in the debris around the House of Parliament during restoration work after World War II bombing damage.

Thus, as on the continent, temples to God Mithra were being built in Britain right up to the end of the Roman period. (Lincoln, *Britain's Unwritten History*.) Summing up the situation Rev. Faber says in *Origin of Pagan Gods* that the religion of the Celts, as professed in Gaul (France) and Britain, "is palpably the same" as that of the Hindus.

➤ Ireland

The *Encyclopaedia of Ireland* (Dublin, 1968) says: "From ancient Irish manuscripts it appears....the pagan Irish worshipped Budh....Budh and Daghdhae are the epithets of the Sun in Irish....All these deities we have found in the ancient manuscripts of Ireland, written centuries before our knowledge of them, among the Indians...." The *Encyclopaedia* also tells about a shrine with a Lingam in it at the foot of a hill at a site called Gowlan. Apart from the Sun God, the preface to the *Prospectus of an Irish Dictionary* lists as many as 18 deities whose names, says the author, are "in common with the Pagan, Irish, and the Brahmins". There are two lakes and one river in Ireland that are named after Goddess Durga.

Among other similarities is the worship of cows and serpents, which is also done in Hinduism. Cow worship is a festival when cows are decorated for the occasion. According to Bhikshu Chamanlal the Irish have a serpent dance which is similar to that in India. He also says Kusha grass is considered sacred and is used, as in India, for sprinkling sanctified water in purification rituals. Ancient records in India show a familiarity with most parts of the world, even including such exotic and distant places as Ireland, writes Charles Berlitz in *Mysteries from Forgotten Worlds*.

A striking detail of Ireland's Celtic past is that Ashwamedh ('Horse Sacrifice'), a major ceremony of ancient Hindu royalty, was performed in Ireland for many centuries. A number of other noticeable similarities between Irish religious traditions and Hinduism have also been pointed out by RP Sharma in *Vishwavyâpi Bharatiya Sanskriti*. For instance there is a tradition of worshipping Fire, Water and Trees. This is just like the religious ecology of the Hindus, who have reverence for Nature in all forms. The Irish consider the Oak tree especially sacred. Their reverence for this tree has an interesting history which goes back to proto-historic time when the Druhyu Vedics migrating Westward reached east Europe millenniums ago. 'Druhyu' became 'Druid' and according to *Chambers's Twentieth Century Dictionary* 'Druid' means "a priest among the ancient Celts of Britain, Gaul and Germany, who worshipped under Oak-trees." The Celts were the common people of the same Vedic migrant community. The language they spoke came to be called Celtic, and according to Chambers's dictionary the Celtic word *derw*, the root of 'Druid', means "an oak".

➤ Dictionaries Damn 'Paganism'

Mithraism, dubbed 'paganism', fell to Christianity. But what do today's Christian Westerners understand by 'pagan'/'paganism'? Interesting answers to this question are provided by dictionaries of the English language. The *Concise Oxford Dictionary* explains 'a

pagan' as "a person not subscribing to any of the main religions of the world, especially formerly regarded by Christians as unenlightened or heathen." As an adjective, 'pagan' is explained by the COD as "irreligious". It gives the Latin root of the word as 'paganus', meaning 'villager', 'rustic', *Chambers's Twentieth Century Dictionary* provided more, and more interesting, details. *The Concise Oxford Dictionary* explains 'a pagan' as 'a heathen', but who is a heathen? *Chambers's Dictionary's* answer is – "one who does not worship the true God". So as an adjective 'pagan' means "pertaining to the worship of false Gods". And why does the Latin root 'paganus' mean 'a rustic'? "Because," says this dictionary, "the country-people were later in becoming Christians than the people of the towns". *The Word Book Dictionary* is still more helpfully specific. For this dictionary 'a pagan' is, first of all, "a person who is not a Christian, Jew or Muslim". It adds, "The Ancient Greeks and most of the Romans were pagans because they did not know or believe in the God worshipped by the Christians and Jews, and later the Muslims." Consequently the adjective 'pagan' means "not Christian, Jewish or Muslim". It clarifies that the Latin root 'paganus', meaning 'rustic', relates to "a time when Christianity was accepted by urban populations", as against rural people.

What do all these dictionary meanings add up to? They add up to the central Christian dogma – what is not Christian is fake, and only the Christian god is the true god. No wonder such moronic monopoly of truth is now being rejected by increasing numbers of thinking Christians in the West, as clearly indicated by a *Time* magazine quote on Paganism given in the *World Book Dictionary*: "The rising paganism of the Western world will make our civilization as cold as interstellar spaces." The growing rejection of dogmatic Christianity in the West springs from the fact that it did not touch the heart, the intelligence, and the soul – as Mithraism of Vedic origin did, and so was praised by historians and scholars. Cumont, for instance, wrote: "Of all the oriental cults none was so severe as

Mithraism, none attained an equal moral elevation, none could have had so strong a hold on mind and heart.” According to Frazer, “There can be no doubt that the Mithraic religion proved to be a formidable rival to Christianity, combining as it did a solemn ritual with aspirations after moral purity and a hope of immortality.” Renan even went to the extent of remarking, “If Christianity had been stopped in its growth by some deadly disease, the world would have become Mithraic.”

➤ **Mithraic Christianity**

Even on its decline Mithraism left its indelible marks on Christianity. In order to make itself popular with the people, Christianity adopted Mithraic rites, festivals and even architecture. 25th December, the popular festival of Mithra’s birth, was taken over. The meal of the Mithraic cult, the idea of ‘eating of my body and drinking of my blood’ was also taken over as the Eucharist. Michaelangelo’s famous painting ‘The Last Supper’ is said to be a copy of a fresco in a Mithra temple. Before it could supplant Mithraism, Christianity had to borrow all its cardinal ideas, like Baptism, Communion, Resurrection etc.

In the same vein Hellen Ellerby writes in the revealing book *The Dark Side of Christian History* in a chapter tellingly titled *Political Manoeuvring: Making Christianity Palatable to the Romans*: “Christianity resembled certain elements of Roman belief, particularly the worship of Mithra or Mithraism. As “Protector of the Empire” Mithra was closely tied to the sun gods Helios and Apollo. Mithra’s birthday on December 25, close to the winter solstice, became Jesus’s birthday. Shepherds were to have witnessed Mithra’s birth and were to have partaken in a last supper with Mithra before he returned to heaven. Mithra’s ascension, correlating to the sun’s return to prominence around the spring equinox, became the Christian holiday of Easter.” “Christians took over a cave temple dedicated to Mithra in Rome on the Vatican Hill, making it the seat of the Catholic Church. The Mithraic high priest’s title *Pater Patrum*,

soon became the title for the Bishop of Rome, *Papa*, or *Pope*.” “The fathers of Christianity explained the remarkable similarities of Mithraism as the work of the devil, declaring the much older legends of Mithraism to be an insidious imitation of the one true faith.” “The ancient, multidimensional pagan worship was prohibited in 392 and considered a criminal activity. In 410 Emperor Honorius decreed it ‘punishable by blood’. Pagan temples were pillaged and destroyed. A 386-written protest to the Roman Government of Christian pillage remains.”

➤ **Other Hindu Deities**

Among other Hindu deities to enter ancient Europe’s religion was Indra, the chief god of Vedic India. He was also known as *Dyaus* (RV - 1:14.3), which became Zeus Pater and Jupiter or Diespiter for the Greeks and the Romans.

➤ **Ganesh**

Another was Lord Ganesh, who had a truly global presence. Ganesh worship was in vogue in various parts of the world, and Ganesh idols have been found in many countries. In Europe there is a *dwibhuj*, two-handed, Ganesh in Rome, depicted as the God of Learning. He has a quill in one hand and an inkpot in the other. As earlier stated, the Greek pantheon has a deity called Janus (an obvious distortion of Ganesh), who resembles this Hindu deity. In a striking similarity between the Greek and Hindu pantheons Janus has been described as the “Guardian God of beginnings”, while Hindus to this day worship Ganesh before beginning any new undertaking.

In the early days of the Roman Empire the place where the Senate met in Rome was known as the Curia. Cumont says, “The most celebrated temple of Janus, for there were several others in Rome, stood before the Curia.” A book on India written in Latin and published in Rome in 1791 AD has a picture of Ganesh on the cover. It shows Ganesh holding a book in his hand. (It was also around this time that Devnâgari type fonts were cast for the first time

in Rome.) (*Shri Ganesh Kosh*, Marathi, Ed. Amarendra Gadgil, Pune.)

Another book titled *British Discovery of Hinduism* contains a picture of Lord Ganesh as an illustration for an essay by Sir William Jones titled *Jones on the Gods*. The earlier-mentioned ancient grotto in Margate contains a representation of Ganesh, says Dorothea Chaplin in her book. According to her Ganesh is also “depicted on a carving at Rheims in France with a rat above his head.”

➤ **Krishna**

Shiva and Sun God apart, Oak says Krishna “was one of the chief deities worshipped in Greece.” And in *India and the English* (London, 1922) Barbara Wingfield-Stratford says: “In many ways Krishna worship is very like Christianity, and there is a strange similarity....in the story of the early years of the Christ child and Lord Krishna.” Oak adds, “The twelve legendary labours of Hercules counterfeited by the Greeks are patterned after the twelve outstanding feats of Lord Krishna, such as slaying Kamsa and lifting the Govardhan mountain.” A large mosaic showing Krishna standing cross-legged under a tree and playing on the flute, with cows grazing around, is on view in a museum in the Greek city of Corinth. In Spain the port city of Cadiz had numerous Krishna temples, as mentioned by Herodotus and other ancient Greek authors. According to Oak “a towering Krishna temple....used to be a familiar landmark with which approaching ships could identify the coast of Spain.” Krishna was an *Avatâra* of Lord Vishnu, and Oak claims that in Britain, Italy and some other countries gigantic statues of the reclining Vishnu had been erected.

➤ **Hindu Festivals**

Other interesting traces of the Hindu religious past of Europe are to be found in the form of Hindu festivals. For instance, the Irish not only have the legend of ‘Kaliya Mardan’, killing of the serpent by Krishna, but also celebrated a Cow Festival like Gopa Ashtami.

Madam Wilde writes: "The Hindus had a cow festival when they walked around the animals with great ceremony, always going westward while they flung garlands on their horns. So in Ireland also there was the Cow Festival, when the cows were decorated with vermin and rowan and were sprinkled with the first water drawn from the sacred well cast into it a tuft of grass called cuishagrass (*Kusha*) to show that the sacred water had been protected. So also Hindus esteemed Cusha grass as sacred and cast it into their well for a like purpose."

There is an interesting Irish myth that in a way explains why the cow was held sacred in Ireland as in India. According to it there was an Irish goddess by name Etain, who once fell ill and remained ill for 1500 years. "Then came the gods of the Sea and the Earth from India with two cows, and she was cured with their milk." This would indicate that some 1500 years after the land was peopled by ancient Indians the cow was introduced into Ireland by those who came from India *via* the sea.

➤ **Ramayana**

An interesting part of Oak's overview of Hinduism in Europe is his claim that Rome had a number of Hindu inscriptions and even actual drawings and paintings of Ramayana episodes hidden in the Vatican. Obviously this cannot be verified, but the iconoclastic history of Christianity makes it plausible. Oak adds that ancient Italians used to paint these episodes on the walls of their homes and on vases. He says hundreds of such paintings have been discovered all over Italy and are contained in books and reports of archaeological finds. A select few have been reproduced in his book *World Vedic Heritage*. One of them shows three women wearing Indian-style apparel, who are "the three wives of Dasharath, father of Rama". They seem to be discussing the sharing of the fertility potion obtained from the sacrificial fire of the *Putra-kâmeshti Yajna*. In the picture a displeased Kaikeyi is looking away. In another "Rama, Sita and Lakshmana are seen walking in single file (exactly as described in

the Ramayana) in the forest. In yet another, Vibhishana appeals to a defiant Râvana to release Sita, who is sitting in front of him. A Jesuit missionary had translated Ramayana under the title *Libroda Saita*, 'Liberation of Sîta'. In 1609 AD Ramayana was translated into French, Latin and Italian.

➤ Significant Factoids

Finally a collection of significant factoids noted by Oak reveal the multifarious effect of Hinduism on Europe: Traditional Hindus still apply holy ash to their foreheads and bodies after bath. This practice is observed among Christians even today. The Christian festival of Lent begins on Ash Wednesday. On that day the priest applies holy ash to the householder's forehead. A royal Roman golden dinner set on display in the British Museum in London has a Swastik carved on it. Ancestor-worship was practised by the ancient Slavs of Europe as Hindus perform *shrâddha*. They used to celebrate the end of winter with a Sankrânti-like festival. Slav peasants built a fire and danced around it, singing songs to Loda, Goddess of Spring. Christianity baptized this pre-Christian festival as Butter Week. Until 1752 AD England's New Year Day used to be March 25, not January 1. The Hindu New Year Day (Gudhi Padwa) is generally very close to this date. The volume *Rome and the Campaigna* contains the photograph of the Temple of Venus in Rome "and an altar upon which every newly-married pair in Rome were expected to offer sacrifice." Fire-worship by a newly-married couple is a matrimonial rite that is still followed by Hindus. At the other end, the funeral rites of the Romans were also identical with those of the Hindus. In her *Wanderings of a Pilgrim in Search of the Picturesque* (London 1975) Fanny Parks gives an elaborate description of the rites performed on the dead body and the funeral procession, all of which is exactly as with the Hindus. The body was then cremated. Parks says cremation was practised in Europe till as late as the end of the 4th century AD. Even plants and animals contributed to the Hindu reflection in Europe's religion. For instance,

says Oak, like the Banyan and the Peepul, considered sacred trees in India, "the oak tree was so sacred for the Slavs that even after their conversion to Christianity and giving up their idols the Slavs would not tolerate their oak trees to be cut down. And in her book *Matter, Myth and Spirit, or Keltic and Hindu Links* Dorothea Chaplin writes: "During recent years it has come to be recognized how deeply the impress of ancient Indian designs and folklore have influenced the pre-Columbian civilization of America. But the designs and beliefs centred around the elephants are just as emphatically revealed in the antiquities of Scotland to Scandinavia." The elephant, not found in Europe, is a typical Hindu religious motif and is abundantly used in decorative temple architecture. (It was exactly the same with Islam. There are no elephants in Arabia, yet the Quran used to be saffron in colour and decorated with a border of elephants.) Another familiar Hindu symbol, the Swastika, was used all over Europe as a symbol in pre-Christian times. Large Swastikas have been found in Britain. (Oak.)

➤ **Triad / Trinity/Trimurti**

Going beyond specific Hindu deities, Anwar Shaikh points out in his book *Vedic Civilization* that the Vedic principle of Triad is found in all Celtic lands of Europe. For instance, in Gaul (France) the Mother Goddess was worshipped in triple form called Matres or Matronae. Her representation in each form is noticeably Hindu. Sometimes she is shown holding a basket of fruit and flowers. In another form she is shown with children in her lap.

In Ireland god Lugus, represented plurally, is possibly the same triple-headed god whose 32 statues are still extant in various countries of Europe. Some of them have also survived in Britain and Ireland. Ireland has many statues of various three-headed deities. For example, there are three Gods of Dannan, who bestowed weapons on Lug. Then there are three Brigits, modelled, says Shaikh, on the truly Vedic pattern. They are Goddesses of Poetry, Healing, and Smithcraft. Also there were three goddesses of battle: Moriggan,

Badb, and Nemain. There is also the trio of Mac Cuill, Mac Cecht, and Mac Greine, who are the husbands of the three Irish goddesses Banba, Fotla, and Eriu.

Madam Wilde talks of another Irish form of the Hindu trinity. She writes, "The Hindus had their triad of Brahmâ, Vishnu and Shiva, representing the Sun at morning, noon and evening. So the Irish Druids had their triad of Baal, Budh and Grian, and they called the May Festival 'Festival La Budha no Baal tiny ae', that is, 'the day of Budh and Baal fires.'"

As noted in preceding pages, early Christianity had borrowed liberally from Mithraism, but as Mithraism was the religion of the Vedic Sun God Mitra, the Christian borrowings had a Vedic origin. The Christian Trinity, which expresses the oneness of the final Reality as God the Father, God the Son, and God the Holy Spirit is, says Shaikh, an extension of the Vedic principle of Triad. India-based French Christian writer Francois Gautier also calls the Christian trinity a transplantation of the Hindu Trinity of Brahmâ, Vishnu and Mahesh.

➤ **Christianity's Hindu Debt**

With such preponderant presence of so many aspects of Hinduism in pre-Christian Europe as well as in Christianity, one may say without exaggeration that the most interesting connection between the Hindu history of Europe and its Christian era is provided by the fact that Christianity itself is indebted to Hinduism. Not for nothing did Will Durant write, "India is....the mother of ideals embodied in Christianity." One may add that apart from Will Durant's "ideals", even core concepts of Hinduism have been borrowed by Christianity. A prime example of this borrowing is the repetition of the *Matsya Avatâra* (Fish Incarnation) story in the Bible itself. It is given in the *Book of Genesis* (chapters 6, 7, 8) in graphic but garbled details as follows:

In the order of the generations of Adam, the first creation of God, Seth, Enos, Kainân, Mahalil, Jâred, Enoch, Methuselah,

Lamech and Noah were born. When Noah was 500 years old he begot Shem, Ham, and Japheth. There was a great flood during the time of Noah. God said to him: "The end of all flesh is come before me; for the earth is filled with violence through them, and behold, I will destroy them with the earth. Make thee an ark of gopher wood....paint it....with pitch. Thou shalt come into the ark....and every living thing of all flesh, two of each sort shalt thou bring into the ark to keep them alive with thee...." Thus did Noah all that God commanded of him. And Noah was 600 years old when the flood was upon the earth....The rain was upon the earth for 40 days and 40 nights....Every living substance was destroyed....And Noah only remained alive, and they that were with him in the ark....After the end of 150 days the waters were abated, and the ark rested....upon the mountains of Arârât....And God spake unto Noah saying: "Go forth of the ark....Bring forth with thee every living thing that is with thee....that they may breed abundantly...." Here, when the Biblical God tells Noah why he is going to destroy the world, the Bible is clearly copying the Gita, where Lord Krishna says He reincarnates himself on earth whenever there is erosion of *Dharma* and resurgence of *A-Dharma*.

Another hoary Hindu link dates from the beginning of mankind. According to Hindu chronology, Svâyambhuva Manu is a man and the first king or leader of men born at the start of this Kalpa – Vârâha. He wanted to procreate and people the earth. He wanted a wife for the purpose. *Harivamsha* (3-14-22) tells us.:

Sharirârdhâdatho bhâryâm

Samutpâditavân shubhâm.

"He from the half portion of his body created a wife very auspicious and good-looking." The story in the Bible is very similar to this. It records: "And Jehovah God proceeded to form the man out of dust from the ground and to blow into his nostrils the breath of life, and the man came to be a living soul....for man there was

found no helper as a complement to him. Hence Jehovah God took one of his ribs and proceeded to build the rib into a woman and bring her to man" (*Genesis* 2-7, 20 to 22). Curiously *Bhavishya Purâna* refers to the process of creation as given in the Bible – "Âdamo nama purushah patni Havyavati tathâ": "The first man was called Adam and his wife's name was Havyavati." In the Bible the name of Adam's wife is given as Eve.

Another Biblical similarity is that while Hindu scriptures make Brahmâ the first Prajâpati ("progenitor of mankind"), who propagated the Vedic sacrifices, according to the Old Testament the progenitor of Man was called Abram, and he too introduced sacrifices. The phonetic similarity between Brahmâ and Abram is noticeable. (*India Abroad*.) With much greater precision Gautier writes in his book *The Indian Origin of Things* that over the centuries numerous historians have pointed out that not only has Hinduism had a predominant influence on Christianity, but that many Christian rites have been directly borrowed from Hindu and Buddhist India. For example, wedding rites very similar to the Hindu *saptapadi* prevailed among many peoples of Europe even after Christianity was established. Among Romans during a wedding celebration the bride went round the family altar while the officiating priest pronounces the sacramental formula. A similar custom prevailed in Germany and Scotland, where the bride and groom went in a procession round the house to the church. In Greece the same rite is still observed in weddings performed in the Orthodox Greek Church. Among ancient people of Poland the bride, on being led to the church, was made to walk three times round a fire, then sit down and wash the groom's feet. (*Encyclopaedia of Religion and Ethics*.)

A great number of events surrounding the birth of Christ, as related in the Gospels, remind one of Krishna and Buddha legends, for example the use of holy water, which is a Hindu practice, the word *Amen*, which comes from the Hindu *Om*, and the structure of the Christian church, which resembles that of a Buddhist *chaitya*.

Belgian Indologist Koenraad Elst also remarks that “many early Christian saints, such as Hippolytus of Rome, possessed intimate knowledge of Brahmanism.” Elst even quotes saint Augustine, who wrote, “We never cease to look toward India, where many things are proposed to our admiration.” According to Ravi Shankar Maharaj Jesus occasionally wore a saffron robe, the Hindu symbol of renunciation, which was not a usual practice in Judaism. Bells too, which cannot be found in synagogues, the surviving form of Judaism, are used in the church, and all know their importance in Hinduism and Buddhism for thousands of years.

Gautier mentions many other similarities between Hinduism and Christianity, such as: incense, sacred bread (*prasâda*), the rosary (*japamâlâ*), the Christian trinity (the Hindu trinity of Brahmâ, Vishnu, Mahesh), and the sign of the Cross (*anganyâsa*). *Japa-mala*, the rosary, is as ubiquitous among Christians (and Muslims) as among Hindus. In her book Fanny Parks observes, “The rosary is made use of in Persia and India by Mahammadans as well as Hindoos....It is remarkable that Christians, Hindoos and Mahammadans, people so distant and distinct, should use rosaries for the same purpose.”

The Hindu *samskâra* or sacramental rite of ‘*upanayana*’ of a child is also found in Christianity as ‘baptism’, a ceremonial immersion in water or application of water. It is only a transformed practice of the Hindus’ morning prayer by offering water-oblations to the Sun God. Rajbali Pande says in his book *Hindu Samskâras* that Hindu and Semetic sacraments originate from the same source, the Vedic.

Signs of Swastika, the typical holy Hindu symbol, have also been discovered in Ireland, Scandinavia, Crete, south Russia and Asia Minor. Roman rulers and Etruscan kings of ancient Italy also used them. So also did the Anglo-Saxons of ancient England. In Greece Swastika symbols were found on a coin.

Even *Namaskâra*, the age-old Hindu religious-cum-social gesture of respectful greeting with folded hands, was a prevalent

custom in Europe in pre-Christian times. An Irish island still has some statues standing with folded hands, in the Namaskara position. A statue of Queen Mary of Scots is also in the Namaskara pose. In old churches in England angels flying in the Namaskara pose can be seen even today. During the performance of a very special ritual the Pope stands in the Namaskara pose.

All Souls Day : This is a Hindu custom of paying homage to departed souls. It is known as *Sarva-pitri Amâvâsyâ*, and falls on the last day of the dark fortnight of the Hindu month Bhâdrapad (September).

Thanksgiving Day : This is another Hindu custom of the green-corn offering thanks to the Lord for bestowing on mankind a good harvest and nourishing food.

➤ **Bible / Jesus**

The Bible itself has some telling references. "Your fathers lived beyond the Euphrates.... and they served other gods," said the Lord (Joshua, 24:2). This is a reference to the Vedic Hindus and their Zoroastrian siblings. The Bible also relates that when Jesus was born three *mâgi*, "wise men from the east", bore gifts to the infant Christ. *Mâgi* is the plural of *magus*, which is a Persian word derived from the Sanskrit *Maga*. The *Maga* were followers of Zarathushtra, who were fire-worshippers and so were called *Maga Brahmins*.

Historians of Christianity and other scholars are now generally agreed that when Jesus grew up he spent more than a decade in India studying Hindu and Buddhist philosophy at one of the premier ancient universities, most probably Nâlandâ. There is also a widespread belief that Jesus survived the crucifixion, escaped to India, travelled widely in the country, and died in Kashmir. German scholar Andreas Faber-Kaiser has supported this belief in his book *Jesus Died in Kashmir*. According to him Jesus had actually been unconscious when he was brought down from the cross at the ninth hour, as the following day was Sabbath, when "bodies ought not to remain on the cross," to quote St. Johan.

Russian traveller Nicolai Nonrovich, who visited Kashmir in 1887, writes in his book *Life of Saint Jesus* that while exploring Ladakh he saw scrolls in Pali which included a biography of Jesus. The scrolls stated that Jesus was born in Israel, and when he was 13 years old disappeared from his parents' house. Leaving Jerusalem he travelled to India, arriving in Sindh, and from there reaching Kashmir-Ladakh.

➤ **Hindu Astronomy**

In the chapter on churches the *Encyclopaedia Britannica* notes that most of the early churches in Europe are astronomically oriented. This is significant in view of the fact that Christian (and Islamic) theology has no place for astronomy, while in the Hindu tradition right from Vedic times every day is invested with astronomical significance.

Christianity being a religion of the Book, the Bible is the final word for Christians for the doctrine of their religion. But enlightened Christians do not take the Biblical account seriously. Almost the entire scientific community rejects the story of the Genesis. "The hypothesis of a pervading spirit co-eternal with the universe remains unshaken," says poet Shelley. This 'hypothesis' is in the realm of Vedanta.

As Ron Laing, a devout Christian and author of many articles on Christianity, points out: "The belief in Karma and Reincarnation is common to both (Hinduism and Christianity), although all the Christ's teachings on these truths were expunged after five centuries at the Council of Constantinople in 523 AD. They are, however, still intact in the Aquarian Gospel". A man reaps as he sows, says the Christ. (*Golden Age*, 1980, Shri Satya Sai Baba Books and Publications.) William Jones wrote to Earl Spencer: "I am not Hindu, but I hold the doctrine of the Hindus concerning of a future state to be incomparably more rational, more pious, and more likely to deter man from vice, than the horrid opinions inculcated by Christians on punishment without end." (*Asiatic Jones* by Arberry.)

Christian Idolatry : Christian missionaries denigrate Hinduism as idolatry. But early Christianity saw nothing wrong with idols and images. In the Roman catacombs (underground places of Christian worship and burial) are to be found the first visual representations of the Biblical story. These pictures were painted between the 2nd and 4th centuries A. D. The most famous painting of all, the 'Creation of Man' by Michaelangelo, was done in the Sistine Chapel of the Vatican in the 16th century under the direct supervision of a Pope. In some of the largest Catholic churches of France there are as many as 3000-4000 statues. Pope Gregory II had defended the use of idols.

Finally, an interesting entry on Christian mythology in Vettam Mani's *Purânic Encyclopaedia* is worth reproduction. Under the heading *Christian Devas, Satan and Devils* the Encyclopaedia states : "Christian religious books commonly use the term Mâlâkhas for Devas. Greek mythology contains a story about the Mâlâkhas who did not obey the orders of Jehovah and how he cursed them, turned them into hell. And in hell they organised a revolutionary party to fight Jehovah. Many leaders talked on the subject of how to take vengeance on Jehovah. It was near about this period that Jehovah created with the dust on earth Adam as his beloved son and settled him in the Garden of Eden. God created from the ribs of Adam the woman called Eve, and they lived in Eden quite happily. Satan and other leaders in hell decided that the greatest revenge that could be taken upon Jehovah was to create troubles for his dear son Adam in Eden. Accordingly Satan went to Eden and made Adam and Eve eat the forbidden fruit, with the result that Jehovah cursed and turned them into human beings and turned them out of Eden. Milton in his reputed poem *Paradise Lost* has told the above story in inimitable language."

➤ **Judaism**

All this Hindu influence on Christianity is, in a way, continuation of the Hindu influence on Judaism. Putting this in a graphic style

Pococke wrote : “When Judah did evil in the sight of the Lord, and built them high places, and images, and groves, on every high hill, and under every tree, the object was Bâl; and the pillar was his symbol. It was on this altar that they burned incense, and sacrificed the calf on the 15th day of the month, the sacred Amâvas of the Hindus. The calf of Israel is the bull of Bâlesar or Ishwar.” Virtually copying Pococke, Burrow wrote : “From the accounts given in the Bible of Idolatries of Ahaz and several others of the Israelite kings, it seems probable that the Gentoo (Hindu) religion had extended itself over most of the kingdoms between India and Mediterranean; the Jews were continually running into it and made ‘carved and molten images’, worshipped in groves under green trees and made their sons and daughters pass through the fire in the same manner as the Fakirs and Brahmins do at present.”

In the area of rituals and customs, Judaism has a surprisingly large number of concepts and practices that are common with Hinduism. They include *Yajna* (fire worship), animal sacrifice etc. In the 17th century a French traveller who had come to India and lived in Bengal for 5 years was so struck with the remarkable similarity between Hindu customs and those of Jews as described in their scriptures that he mentioned the fact in the book he wrote on his return to Europe. Rev. K. R. Gopalachar-Vepary of Madras, a former Brahmin, wrote in the *Social Reformer* of Nov. 17, 1923 : “I have deeply studied the Bible for the last 10 years. I was amazed to read the Book of Leviticus in the Bible. All rituals of ancient Jews of Palestine described in this book correspond fully with the rituals my conservative Hindu mother used to follow.”

The Hindu *Châturvarnya* social classification system is also discernible in the Old Testament. Babarao Savarkar writes in *Khrista Parichay* (Marathi) : In Jesus’s times the Jew society had two classes, the scholars / the learned and the common people. The learned were called Pharisees. They used to claim descent from sages, like Brahmins claiming Rishis’ *gotra*. Yet another scholar to find a surprisingly large number of common ideas and practices of the Jews

with ancient Hindu practices of *yajna* (fire worship) and so on was Prof. Maconochie, who visited India in 1783 and 1788, as quoted by Dharampal in *The Beautiful Tree*. He held that the history, poems, traditions and fables of the Hindus might throw light on the history of the ancient world and “upon the institutions of that celebrated people from whom Moses received his learning.”

Tulsi, the holy plant of the Hindus, was revered by Jews (as well as Christians and Muslims), as also the *Vata* (Banyan) and *Pipal*, worshipped by Hindu ladies on special occasions. Jews also have a festival of lights like Diwali (P.N. Oak, *World Vedic Heritage*.) A Jew in Mumbai once told Babarao Savarkar, “We migrated to Palesstine from India.” (*Khrist Parichay*.)

A footnote in the book of Marco Polo’s travelogue records : “Much has been written about the ancient settlement of Jews Kaifungful (in China). One of the most interesting papers on the subject is in Chinese Repository, Vol. XX. It gives the translation of a Chinese Jewish inscription. . . . Here is a passage: ‘With respect to the Israelite religion we find on inquiry that its first ancestor, Adam, came originally from India, and that during the (period of the) Chau state the sacred writings were already in existence. The principles therein contained are very mysterious, being treated with the same veneration as Heaven’. The footnote also records that the Jews originate from India. (Vol. I, *Marco Polo’s Travels*, translated and edited by Sir Henry Yule.)

A sort of final verdict on Judaism was delivered by Henry David Thoreau when he wrote in his Journal : What extracts from the Vedas I have read fall on me like the light of a higher and purer status. The religion and philosophy of the Hebrews are those of a wilder and ruder tribe, wanting the intellectual refinements and civility of Vedic culture.”

➤ **Europe’s Hindu Gypsies**

And finally a footnote on Hinduism that can almost be called contemporary – the earlier-mentioned Hindu gypsies of Europe,

the nomadic Indian migrant communities known as Roma gypsies. According to Dr. Shyam Shastri, an authority on Roma gypsy literature, there is historical evidence showing that they were all once *Jindu* (Hindu), although many of them are now Christians and Muslims. Despite their later conversion to Christianity or Islam they still worship their goddess Sattasara, a form of Goddess Durga. Pictures of Rama, Krishna and Durga or Kali are easily found in their homes. On the other hand there is no mosque in a Roma colony. Writing in the weekly *Organiser* under the title *Roma: Our Roaming Brothers* Dr. Lokesh Chandra says: "When the Greek scholar Paspatis heard the Roma call the Cross *Trushul* under the clear sky of Constantinople, he realised that it refers to *Trishul*, the Trident of Shiva, the God of Dance. Long last, here was their origin."

➤ **Hindu Facts**

All these facts, put together, make the distinctly Hindu history of Europe, starting with Greece and extending to England. While Pococke says, "the whole of Greece, from the era of the supposed godships of Poseidon and Zeus.... was Indian.... in Religion", Dean Inge, commenting on the teachings of Christian missionaries such as Plotinus, Clement, Gregory, Augustine and the like bluntly says they are the ancient religion of the Brahmins "masquerading in the clothes borrowed from the Jewish, Gnostic, Manichaean and Neo-Platonic allegories".

Thus, *religion*, as a civilizing influence, reached Europe from India in proto-historic times, spread far and wide in historic times, and is present even in present times. Going beyond Europe, French savant Prof. Sylvain Levy observed, "The Vedas throw a unique and remarkable light on the religious past of a vast human group which reaches from the Atlantic to the Ganga." Going much more specific, W. D. Brown observes: "The unprejudiced mind cannot but admit that Hindu is the parent of....theology of the world." The preface to Vol. VI of *Indian Antiquities* also asserts: "The Hindoo

religion probably spread over the whole earth. There are signs of it in every system of worship.” To add a small but significant footnote here, according to PN Oak in *World Vedic Heritage*, Gypsies living in Scopje city in Macedonia have Hindu names like Sudhakant, Asha, Meenakshi, Ramkali.

To this ancient religious scene in Europe a modern and interesting update is that the Greeks now want to go back to their rich, pre-Christian culture. According to media reports, one day in 2006 hundreds of Greeks went to the Acropolis in Athens and conducted a religious service according to ancient rites near the temple. After the ceremony they pledged their support to a revival movement and to struggle for their right to conduct marriages and other rites according to their original, ancient religion. One of them, a woman by name Doretta Peppe, said, “We have been persecuted for the last 1600 years by the Church. We shall carry on our way of worship in the temples.” The international publicity which this ceremony received provoked Padre Efstathios Koolas, head of the powerful Greek Orthodox Church, to react with an arrogant statement, saying, “They are a handful of miserable resuscitators of a degenerate, dead religion who wish to return to the monstrous, dark delusions of the past.”



3. Mythology

MYTHOLOGY and Religion are virtually inseparable. So when Vedic Indians reached Europe, they took with them not only the Vedic Religion but also its companion, the Vedic Mythology. Both struck deep roots in the European soil, undergoing local adaptations as time and circumstance required, but retaining the Vedic core.

Over the ages, European mythology developed into four broad streams – West European (Celtic), South European (Graeco-Roman, but primarily Greek), North European (Teutonic), and East European (Baltic and Slavonic). However, they were all linked to a common origin, the Vedic.

➤ Celtic Mythology

As the Celts/Druids (Druhyus) were the most ancient Indians to reach and settle in Europe, Celtic mythology is naturally the oldest of European mythologies. Unfortunately that also makes it the haziest. Some scholars, like Dorothea Chaplin in

her book *Matter, Myth and Spirit, or Keltic and Hindu Links*, have made plausible efforts to equate Celtic gods with gods of other pantheons, but they are generally based on similarity in names. Talageri discounts such comparisons, at the same time allowing that "Dorothea Chaplin's works serve only to show that Celtic mythology and religion were very 'pagan' indeed, in which respect it certainly resembles Hinduism as much as many other pre-Semitic religions." Here it would be pertinent to point out that the only 'pre-Semitic' religion of Europe's known history was the Vedic religion, and whatever pre-Vedic religion proto-Europeans had can now be traced only in misty myths of an unknown past. Secondly, Talageri's epithet 'pagan' itself goes against his assertion, for 'pagan' specifically means non-Jew, non-Christian and non-Muslim, and Mithraism, the Roman Emperors' official religion of Vedic Sun ('Mitra') - worship was dubbed 'pagan' by Christian iconoclasts as an excuse for destroying it.

Like Celtic gods, Celtic goddesses are also considered too old for history. *Larousse Encyclopaedia of Mythology* says the concept of the Mother-Goddess had evolved in much earlier (that is, pre-Celtic) times, and had continued through and beyond the Celtic period, so Celtic goddesses were "re-statements of an old theme." To this, however, there is a major exception – that of the major goddess Danu, who was considered so important that all the gods were collectively known as "People of the Goddess Danu". This is not only a major but significant myth, because Vedic mythology too has Danu, one of the wives of Kashyapa, who is on par with Aditi, the mother of the Gods, and hence a Mother-Goddess in her own right.

T. W. Rolleston reiterates the point about the obscurity of early Celtic gods in his book *Myths of the Celtic Race*. However, he points out that an ancient Roman writer, Lucan, "mentions a triad of deities, Aesus, Teutates and Taranus", and holds that "in these names, we seem to be in the presence of a true Celtic, that is, Aryan tradition." Here one may easily recall Anwar Shaikh's emphasis on

how the Triadic Principle of the Vedic Religion had permeated the religious scene in ancient Europe. Of the three names mentioned above, the first, Aesus, can be compared with Vedic Asura, keeping in mind that in the Rigvedic period Asura and Deva were interchangeable terms for a long time. The second name Teutates means 'warlike' or 'valiant', so Rolleston opines that Teutates is "a divinity equivalent to Mars." Here it is interesting to note that Max Muller derives the name Mars from the same root as the name Marut. Although the Maruts were later identified with the wind, in the Rig Veda they are identified as "storm-divinities". The third name, Taranus, is derived from the Welsh-Cornish-Breton (Celtic) word 'taran', which means 'thunderbolt', and is therefore obviously a name for the Thunder-God. The Sanskrit word *taraò* means "sky" or "heaven", so it is possible that, like the name *Dyaus*, "Sky" which became the name of the Thunder-God in the Greek mythology of southern Europe, the word *taraò*, "sky", may have become the name of the Thunder-God in the Celtic mythology of Western Europe, and later came to mean also "thunderbolt", with which the Thunder-God is identified.

➤ Greek Mythology

In sharp contrast to the nebulous Celtic mythology, the Graeco-Roman, but primarily Greek, mythology of south Europe is the best-known of European mythologies, quite detailed, and with a striking resemblance to Hindu mythology in many respects. In fact quite a few instances of specific similarity between Greek Gods and Hindu Gods strongly suggest the Hindu origin of Greek mythology.

The most noticeable pair among them is the Thunder-Gods Zeus and Indra. The Greek thunder-God Zeus is armed with a thunderbolt, and he is also the king of the Gods (and so is his Roman counterpart Jupiter). Indra is also the Thunder-God armed with a thunderbolt who is king of the Gods. There is a clear identity between Zeus/Jupiter and Indra, and it is also clear that Indra is the original name of the Thunder-God. This is proved by the earliest recorded

inscriptions of the Middle East (Inar, Indas, Indara), as also by the different names in Graeco-Roman mythology (Zeus Pater, Jupiter) and Baltic/Slavonic mythology (Pyerun, Perkunas etc.), both of which are traceable in the Rig Veda as the names of two other Gods, Parjanya and Dyaus Pitar. Indra is derived from the same root as 'indu' (drop), and is hence the natural name for a god of thunder and rain, while Dyaus (Zeus) is derived from 'light' and is the natural name for a sky-god, which he is in the Rig Veda.

Another clearly comparable pair is Mars and Maruts, or, more specifically, Ares/Mars and Rudra/Maruts. Here the identity between the gods of south European mythology and the Rig Veda is quite apparent. Ares (Mars to the Romans) is the Greek God of War. In the Rig Veda Rudra and the Maruts (also known as *Rudriyas*, or minor Rudras) are associated with the more destructive aspects of a thunderstorm. As noted earlier, the Maruts were later identified with the Wind, but in the Rig Veda they are identified as 'storm-divinities'. The name Mars is derived by Max Muller from the same root as the name Marut, which makes for perfect identity between the two names. This identity continues even in respect of colour in the case of Rudra. The *Vâjasaneyi Samhitâ* describes Rudra as being red in colour, while Mars is also considered to be red in colour, and has given his name to the red planet. Interestingly enough, according to Apte's Sanskrit Dictionary, *Rudhira*, which means 'blood', is also a name of planet Mars.

Ares /Mars is the God of War. In the Rig Veda Rudra too is very obviously a god of war. As Macdonell points out: "The Rigveda often mentions Rudra's weapons of offence. He is once said to hold the thunderbolt in his arm (II. 33.3). He is usually said to be armed with a bow and arrows (II.33.10-11; V. 42.11; X.125.6; VII. 46.1).... In the Atharva Veda he is called an archer (1.28.1; VI. 93.1; 15.5.1-7). In that and other later Vedic texts his bow, arrow, weapon, bolt or club are frequently referred to (*Atharva Veda* 1.28.5, etc.; *Shatapatha Brâhmaṇa* 9.1.1.6)."

There is also another, completely different aspect in which Mars and Rudra are strikingly similar. According to *Larousse Encyclopaedia of Mythology* Mars was “in ancient times the God of vegetation and fertility”, and there are, in the case of the Greek Ares also, “hypotheses which would make him primarily a fertility-god.” Rudra/Shiva is also primarily a fertility-god. The worship of the Lingam is a basic form of Shiva-worship.

The functions of Mars “were at first rustic....under the name of Silvanus, who later became a distinct divinity, he presided over the prosperity of cattle.” In the *Vâjasneyi Samhita*, Atharva Veda, and later, Rudra is also the God of cattle. In the case of Mars “several animals were sacred to him,” while Rudra/Shiva was called *Pashupati*, Lord of the Animals.

Ares, in Greek mythology, is considered to be “a furious god”, for whom even the immortals of Olympus had little sympathy. The Greeks themselves thought of him with terror. Likewise Rudra in the Rig Veda is also depicted as a God feared alike by gods and men. Even the Gods were afraid of the bow and arrows of Rudra lest he should destroy them.

Among other similarities, the *Matsya Avatâra* story in the Puranas is also found in Greek mythology. The story of the *Mahâ Pralaya*, as related in the *Shatapatha Brâhmana*, Mahabharat, and the Puranas tells how the ship carrying Manu, along with many creatures and plants, is taken to the safety of a mountain-top by God’s Fish Incarnation. The Greek version of this legend is more or less the same. There is also a striking resemblance between the mythology contained in the Greek epic *Iliad* and the Mahabharat. A remarkable instance in point, the epic’s story of Achilles’s mother making his whole body invulnerable, with the fatal exception of his heel, is exactly like the story of Duryodhana’s mother Gândhârî making his entire body invulnerable with the fatal exception of his thighs. Then again, in Cottrell’s opinion the Greek myth of Zeus carrying off Europa, daughter of a ‘Syrian’ king allied to Egypt’s

rulers, the Pharaohs, and getting a son called Minos by her, is probably an allegorical representation of the westward march of the Indo-Aryan nation from its homeland *via* Hellespont.

All in all, the total evidence linking South European mythology to Vedic/Hindu mythology is quite unambiguous. Pointing out the Greek acknowledgement of the Greek link Babasaheb Deshpande writes in *India as Seen and Known by Foreigners*: The Greeks “derived their cosmogony from the Hindus, as is apparent from the account which Damascus gives of the doctrine of Orpheus as under: In the beginning Kronos (Sun) out of chaos created Other (day) and Erbos (night). Therein he laid an egg (*Brahmând*) from which came Phanes, furnished with three heads (the Hindu Vedic Trinity, viz. Brahmâ-Vishnu-Mahesh). Phanes created the man and the woman from whom the human race is derived. The cosmogony of Egyptians also adopted the Hindu egg which, divided into two, formed the heaven and the earth.”

➤ Teutonic Mythology

The other great European mythology is the Teutonic mythology of North Europe (Germany and Scandinavia). Here Woden/Odin (Woden in Scandinavia, Odin in Germany) is the king of the Gods, who are collectively called the Aesir. In the Rig Veda Varuna is the king of the Gods, who are collectively known as Asuras. Stressing the similarity between the two *Larousse Encyclopaedia of Mythology* says, “Like Varuna, Woden rules principally by magic, and notably takes an interest in the wider universe, not only in the world of living men.” Likewise, “it was Odin who ordained the laws which ruled human society.” Similarly the Vedic Varuna is the moral governor of the universe and the preserver of rita, the cosmic order. Woden is always conceived as part of a pair with another God, Tiw/Tyr/Ziu, who is the God of contracts. Varuna is also conceived in combination with Mitra, who is the God of contracts. Woden/Odin is always conceived of in royal attire, wearing a flowing mantle, a shining breast-plate and a golden helmet. He held court in a vast hall

called Valhalla, which glittered with gold and had five hundred and forty doors. Varuna's description in the Rig Veda is exactly similar. He is also attired in a golden mantle and a flowing robe. He sits in his mansion made of gold ('*hiranyam yonim* '), which has a thousand columns and a thousand doors. Thus there is unmistakable, and close, identification between the Teutonic Woden/Odin and the Vedic Varuna.

Donar/Thor is the Thunder-God of the Teutons. He is also the God of War armed with a thunderbolt. According to Tacitus the (ancient) "Germans invoked him and chanted his glory when marching into battle." Indra, likewise, is the Thunder-God of the Rigveda as well as the God of War armed with a thunderbolt. The Rigveda is full of hymns in which the Vedic Aryans invoked him and chanted his glory when marching into battle. (Incidentally, this dual function of the Thunder-God is also found in the East European mythology, where Pyerun is also a God of War.)

While Woden was the king of the Gods, Donar/Thor was revered by all Teutonic tribes, some of which even considered him the most powerful of all the Gods. In the Rigveda too, Varuna was the king of the Gods, but Indra was (as Macdonell puts it) "the favourite national God of the Vedic Indians". In one of the hymns (X. 124) Indra takes over from Varuna and becomes king of the Devas. This parallel situation of more or less rival kings is found only in the Teutonic and Vedic mythologies.

Donar/Thor was "the very apotheosis of the warrior.... a tireless adversary of giants and demons". Likewise Indra is also, in the Rigveda, the adversary of an endless number of demons. In the Rigveda, moreover, the naturalistic origin of these battles is apparent, since the demons killed by Indra are almost invariably and demonstrably demons of drought.

Coming down from Gods to men, while Hindus believe that Swâyambhuva Manu was the progenitor of the human race in this

Kalpa, Teutonic mythology considers *Manus* the ultimate ancestor of the Teutons. The German *Manus* or *Menesh* (as well as the English *Man*) has a close resemblance to *Manushya* in Sanskrit. Summing up the situation in a single sentence, Scandinavian Indologist Count Biornstierna asserts : “We have (in Scandinavia) proof that the myths of the Scandinavians are derived from those of the Hindus.”

➤ East European Mythology

In the case of East European mythology, the *Larousse Encyclopaedia of Mythology* says: “We have very few precise data on the Slavonic world in the days of Paganism”. However, there are parallels available that are traceable only in Vedic mythology.

To begin with, the one God common to both the sections of the East European world (Baltic and Slavonic) is the Thunder-God “Pyerun” (Pyerun in Russian, Piorun in Polish, Perun in Czech, etc.), who is known in Baltic (Lithuanian) mythology as Perkunas/Perkaunas. This name has no parallel except in Vedic mythology. As the *Encyclopaedia* points out: “The origin of this name goes back to remotest Aryan times. Among the Hindus, the God Indra was named Parjanya, a name which has the same root as “Pyerun”. Parjanya was the God of Rain in the Rigveda, or, as Monier-Williams puts it, “rain personified”.

Slavonic: The very word for God in the Slavonic languages, *Bog*, harks back to the Rigveda. *Bhaga* is the name of a Rigvedic God identified with the sun. One of the epithets of Bhaga is Bhagavân (RV VII. 41), which today is a common word for God in India.

The basic God of Slavonic mythology was the Sky-God. According to the *Larousse Encyclopaedia* “they personified the sun as the God Svarog. The root of this name (*Svar* means bright, clear) is related to the Sanskrit. The sky gave birth to two children, the Sun, called *Dazhbog*, and Fire, which was called *Svarogich*, meaning “son of Svarog....or Ogon (which can be compared to the Sanskrit *Agni*).”

All these show direct connections with the Vedic culture. All three names have their closest affiliations in Vedic mythology by way of Sanskrit. *Svarog* is *Svarga* (heaven), *Dazhbog* is derived from the Sanskrit root *damsh* -, to shine, and *Ogon* is *Agni*.

Baltic: Among the Baltics there is a pair of twin Gods, twin sons of the Lettish God, who are identical with the Ashvins, and are also found in South European (Greek) mythology. The twins are the young and handsome twin sons of the Sky-God (Sanskrit *Divo napâtâ*. Lithuanian *Saules Suneliai*, Greek *Dios Kouroi*). They have a sister who is the "daughter of the Sun" (Sanskrit *duhitâ Suryasya*, Lithuanian *Saules Dukterys*, Greek *Helen*, daughter of *Helios*, the Sun). Except for this one element which it shares in common with both Vedic and Greek mythology, East European mythology has common elements exclusively with Vedic mythology.

These are the four broad territorial divisions in which Shrikant Talageri has categorised and discussed what he calls the different streams of European mythology in his well-researched book *Aryan Invasion Theory and Indian Nationalism*. He has convincingly shown that they all fit perfectly into Vedic mythology, as every single common element is found in the Rigveda. Consequently one may even call them four European streams of Vedic mythology, the world's original mythology.

Greek/Vedic Mother-Goddess: Among them Greek mythology is, as stated earlier, best-known and quite detailed, and it is so obviously of Vedic/Hindu origin that a number of Western scholars and writers have expressed their acknowledgement of this fact. The Greeks had a large pantheon, but it started with a Mother-Goddess as the presiding deity. This primordial beginning is described thus in the *Larousse Encyclopaedia of Mythology*:

"In the beginning, Hessiod says, there was chaos, vast and dark. Then appeared Gaea, the deep-breasted earth....The Chaos of Hessiod simply designates open space....a pure cosmic principle

devoid of God-like characteristics....The only divinity with well-defined features is Gaea, the earth. According to Hesioid, it seems likely that Gaea, from whom all things issued, had been the great deity of the primitive Greeks....the Mother-Goddess. This is again confirmed by the Homeric hymn in which the poet says: 'I shall sing of Gaea, universal mother, firmly founded, the *oldest of divinities*' (Gaea) was at one time the supreme Goddess whose majesty was acknowledged not only by men but by the Gods themselves." Here a clear linguistic link between the Greek mother-goddess concept and Hindu theology is provided by the remarkably-similar-to-Gaea Sanskrit word *Go* (nominative *Gau*), which means both Earth and Mother.

Developing from this point, Greek mythology built up a basic pantheon of 12 great Gods and Goddesses on Olympus, of whom 6 are Gods (Zeus, Poseidon, Hephaestus, Hermes, Are, and Apollo) and 6 are Goddesses (Hera, Athene, Artemis, Hestia, Aphrodite and Demeter). Their exploits and adventures are the stuff of Greek mythology. – And these may well be imports from India. For “the whole of Greece, from the era of the supposed godships of Poseidon and Zeus down to the close of the Trojan war (was) Indian in language....and religion....”, writes Pococke in *India in Greece or Truth in Mythology*. He adds that *Koilon*, ‘Heaven’ of the Greeks and *Coleum*, that of the Romans, were both derived from the Hindu Puranic *Kailâsa*.

In her *Narrative of a Journey Overland from England to India* (London, 1830) the author, Mrs. Edwood, becomes much more specific and believes that Pythagoras may have imported some of the adventures of the Hindu Gods and ascribed them to Greek deities. According to her, Indra whirling his thunderbolt appears to be the same as Jupiter, Krishna is “evidently Apollo”, Lakshmi “appears to be Ceres”, and Kali Hectate or Prosperpine. For Jacolliot, the legend of Jason and the Golden Fleece is nothing but an echo and enfeebled version of the Ramayana. Summing up the

situation in his *India: The Cradle of Civilization* Bhikshu Chamanlal observes that the seal of the Hindus "is imprinted in every page of Greek mythology".

➤ **Chronological Context**

Pococke has also attempted to give a time-frame to the Greek development of Vedic mythology. According to him the Greeks separated from their Vedic brethren around 5000-4000 BC, those moving westward following their pre-Christian religion of Sun-Worship, called Mithraism. In his opinion there are a very few references to these happenings in their mythology, especially in their belief that man set foot on earth for the first time in about 4000 BC – the probable date of starting their separate life in Greece and contiguous regions. Another scholar, Leonard Cottrell, has made a more nebulous effort at a chronological context. According to him the so-called invasion of Greece in ancient times was actually one of the waves of one big westward movement of Indics, covering several centuries.

➤ **Hindu/Greek Theosophy**

Finally, in the study of Greek mythology a strikingly interesting departure from the explanations provided by Talageri, Pococke *et al* about Hindu origins of Greek deities and their exploits is provided by Theosophist Geoffrey Hodson in his remarkable book *The Concealed Wisdom in World Mythology* (Theosophical Publishing House, Madras, 1990), in which he gives elaborate philosophical interpretations of various Greek myths within the framework of Hindu terminology.

Beginning with the Vedic *Matsya Avatâra* story, which is present in Greek mythology, he writes under the sub-heading *The Fish Symbol*: "The fish and the element of water, of which it is a denizen, are so frequently introduced into world scriptures and myths as to justify detailed study and preferred interpretations." Its importance is underscored in three descriptions of world floods.

Like king Vaivasvata Manu's boat being taken to safety during the *Mahâ Pralaya*, Deucalion of Greek mythology, with Pyrrha on board a wooden chest, was guided to dry land (Mt. Parnassus) by his father Prometheus. Similar flood-related legends in other mythologies are also mentioned by Hodson, such as Athena rescuing Hercules from a monster fish, the prophet Jonah released from a whale's belly, and the Biblical story, mentioned earlier, of Noah being guided to safety by God Jehova during the Great Deluge.

At another place, writing under the sub-heading *Our Lord the Sun*, Hodson quotes *The Secret Doctrine* of Blavatsky, the exponent of Theosophy: "The Sun is the heart of the Solar World (System) and its brain is hidden behind the (visible) Sun. Thence sensation is radiated into every nerve-centre of the great body, and the waves of the life essence flow into each artery and vein.... The planets are its limbs and pulses...." Hodson comments: "In Greek mythology Helios is to some extent such a Being, quite remote from the nature and restrictions of a human entity." The "groups of planets, physical and super-physical in the present solar system.... are said to be presided over by a Manu".... "the Solar Logos in Greek mythology, Helios", is the "Presiding Deity" at the heart of the solar system as a whole – "physical, super-physical and spiritual". Helios the Sun-god.... also represents both the solar *Atmâ* in the Universe and the *Monad-Atmâ* in Man. "The whole of this vast 'Empire', physical and super-physical, with all its evolving life and beings may thus be assumed to be within the care, responsibility and charge of an approximate approach to the concept of the Deity *Brahmâ*."

Elsewhere, during his discussion of Greek mythological characters, Hodson refers to the notorious Medusa, one of the three Gorgons (female horrors). The three sisters (Stheno, Euryale, and Medusa) had snakes for hair, and faces so horrible that anyone who looked at them turned to stone. About them Hodson writes: "The peculiar serpentine hair rising above the Gorgon's head compares with the interweaving pathway followed by the 'Serpent Fire' (the

Life Force known as *Kundalini Shakti*) rising along the spine into the brain of an 'enfire'd' Yogi. He adds: "This 'Serpent Fire' was an ancient symbol for fertility. In Greek mythology serpentine creatures are used frequently in addition to Medusa."

Subjecting this Greek serpent myth to a Hindu interpretation, Hodson writes: "Interpretations of Greek myths presented themselves to one strictly in accordance with Hindu philosophy, as illustrated by the Serpent Power. The Third Aspect of the Hindu Trinity – the Lord Shiva, is also pictorially represented as an ascetic whose matted locks are tied in the coils of a serpent which holds its hood above his head, whilst another reptile adorns his neck, a third one serving as a 'sacred thread'."

"The production in India of stones upon which the three *nâdis* are carved, and their placement in considerable numbers near trees under which women seeking children ceremonially circulate, refers directly to the recognition of the serpent as a symbol of both generative power and esoteric wisdom."

Hodson's explanation of the *Kundalini* also extends to the Unicorn, Greek mythology's horse with a horn on its forehead, "whose spinal cord is presumed to extend beyond the *medulla oblongata* through the pituitary gland and out between the eyes, after which it becomes hardened into a horn." After giving these anatomical details Hodson adds: "Occultly interpreted, this refers less to the physical spinal cord than to the interior etheric canal which runs along its length and is called *Sushumna nâdi*. The creative fire, Serpent Fire or *Kundalini*, flows along this canal from sacrum to brain...." Here despite the Sanskrit terminology used for the explanation of a Greek concept Hodson misses out on a small but significant detail – the fabled animal's Hindu connection. This is available in *Chambers's Twentieth Century Dictionary*, which gives the meaning of *Unicorn* as "a fabulous animal mentioned by ancient Greek and Roman authors as a native of India, with a body like that of a horse and one straight horn on the forehead."

While Greek mythology is the clearest of European mythologies, Celtic mythology is the haziest, says Talageri. However, Pathak's research into it, especially in the Celtic mythological region of England and Ireland, has clarified the scenario appreciably. Tracing the running link in all European mythologies from Greek to Celtic he points out that the Monster Serpent-killing described by Talageri as common to all of them is the Indra-Vritra myth of the Rigveda, which acquired a truly international presence. Even outside Europe it has become part of many mythologies of the ancient world.

Pathak explains and asserts the original naturalistic character of this myth, which, he says, both the Greek and Teutonic mythologies appear to have forgotten, but, he adds, they do seem to preserve the memory that the Serpent Monster had something to do with the waters (in Teutonic mythology) and with a mountain (in Greek mythology). Thus the Great Serpent of Midgard killed by the Teutonic Donar/Thor is described as one whose innumerable coils caused such violent tempests in the ocean, and the Great Serpent Typhoeus is killed by the Greek Zeus by crushing him under a mountain.

➤ **Vedic / Celtic Danu**

The Greek myth, Pathak points out, retains one more element of the literalistic depiction of the myth in Vedic literature: The Great Serpent Typhoeus is in fact a creation of the Mother Goddess Gaea, created specifically for the purpose of fighting and killing Zeus. The Greek poems depict Gaea mourning the defeat of her children by Zeus, and therefore creating Typhoeus in order to avenge their defeat. Likewise, the Great Serpent Vritra is depicted as a son of Danu (who, being a wife of Kashyapa, like Aditi, the mother of the Gods, also ranked as a Mother Goddess,) and is in one place mentioned as her creation. The Rigveda (I. 39.9) also depicts a forlorn Danu mourning the defeat of her children by Indra, but with the difference that this takes place after the defeat and destruction of Vritra.

Danu is a prominent figure in Puranic mythology and a central one in the Celtic. The Celts worshipped two main Gods, Dagda (also called Eochaid Ollathair, or “Father of All”) and Lug (mentioned earlier) and two main Goddesses, one called Danu, by the exact Vedic name (but also called Anu or Brigit), and the other Macha. And, argues Pathak, “the Gods of the Celts....perhaps complemented the functions of the Goddesses, who in turn appear to have retained the concept of the Mother-Goddess which had evolved in much earlier times.... the Gods of the Celts in Ireland are frequently called “the people of the Goddess Danu”. In the Puranas too the Dânavas, Progeny of Danu, are classed as celestial beings. In fact it appears that Vedic/Celtic mythology has had a deep and abiding influence on the Irish mindset.

➤ Old English Mythology

Apropos the English version of Celtic/Vedic mythology Pathak refers to Branston’s (1974) discussion of the ‘Old English’ belief regarding God Thunor (or Thor in Ireland and Scandinavia), who fights the Serpent Illuyankas. In England Thunor made his name first among the Saxons of Essex, Sussex and Wessex. His earliest attributes are those of a storm or weather god. The myth of Thunor fighting the World Serpent was current among Saxons in England as late as 900 AD. The famous Gosforth Cross in Cumberland shows the picture of Thunor fighting the World Serpent – the Vedic *Ahi Vritra*. Thus, says Pathak, the Vritra myth found in Vedic literature had prevailed in England right up till the 10th century AD, when Christianity was well-established.

In Thunor’s personal appearance there was no mistaking the similarity in complexion and build with the Hindu, Hittite and Norse weather-gods. The Saxons conceived him as a giant who carried a huge hammer capable of dealing with all his and their enemies, and “as their work-a-day foes were famine caused through crop failure, cattle-plague and pestilence”, Thunor’s connection with farming made

him a fertility element in Saxon / Old English mythology. Rigvedic lore also describes Indra's person and character in very similar terms: He is golden in colour (RV 1.7.2, VIII, 66.3); his body is gigantic, his neck mighty and his back brawny; and just like Thunor/Thor, he is tawney-bearded (X.23.4).

A noticeable difference (albeit of degrees) between the interpretations of Talageri and Pathak is that while the former generally accepts Indra as god of war the latter's writings consistently highlight the deity's naturalistic interpretation. He says "Indra was not a war god but associated with agricultural operations", and his dragon-killing meant releasing the flow of obstructed water for agriculture. In support of this phenomenon Pathak quotes the Rigvedic invocation to Indra on his victory in the battle with Vritra. The *richa* RV-VI. 30.5 says: "Oh Indra, you have set free the waters (which were spread on a vast landscape in all directions as they were obstructed by Vritra), fracturing the solid barrier of mountains; you became the lord of all living beings. You made the Sun, the Sky and *Ushas* manifest together."

Another interesting source of Old England's "pagan" mythology is the epic *Beowulf*, which has been discussed by Brian Branston in *The Lost Gods of England* (Thames and Hudson, 1957). This epic poem of 3000 lines was composed in England about 650 AD, at a time when the conversion of the English to Christianity was hardly complete. There is reliable history in *Beowulf*, but it is not English history, it is a memory of people who lived and events which took place in continental Europe. Consequently, although the poet's purpose was clearly Christian, he "could not entirely suppress all pagan folk-memories and unwittingly left a number of clues to the old mythology scattered throughout his poem." Another Anglo-Saxon poem, *Dream of the Rood*, which was composed around the same time as *Beowulf*, describes the bloody crucifixion of Christ, which, says the poet, was *wrathra wyrda*. While *wyrda* or *wyrd* meant

fate or terrible experience, Pathak wonders if *wrathra* refers to Vritra, for the *Vritra-Vadha* story was one of the important Vedic myths that had spread in Europe. Yet another Old English poem, *Charm*, is about the marriage of the Sky Father to Earth Mother. "This is no Christian or Old Testament tale.... This is a pagan story...." And if, as all encyclopaedias and dictionaries explain, *pagan* means anti-Semitic in general and anti-Christian in particular, it can only mean that this is a Vedic/Hindu story.



4. Philosophy

EUROPE'S philosophy is essentially Greek philosophy, and Greek philosophy is virtually a transplant of Hindu philosophy. Acknowledging this fact Col. Olcott says: "The modern school of comparative philology traces the migration of Aryan civilization into Europe by a study of modern languages in comparison with the Sanskrit. And we have an equally, if not a still more, striking means of showing the outflow of Aryan thought towards the West in the philosophies.... of.... Greece, Rome and Northern Europe. One has only to put side by side the teaching of Pythagoras, Socrates, Plato, Aristotle, Homer, Zeno, Hesiod, Cicero, Schoevola, Varro and Virgil with those of Veda-Vyas, Kapila, Gautama, Patanjali, Kanâda, Jaimini, Nârada, Pânini, Marichi and many others we might mention, to be astonished at their identity of conceptions." Summing up this situation with a quotable quote Clement of Alexandria remarked, "We the Greeks have stolen to the 'Barbarians' their philosophy." In another memorable tribute Lucianus,

another Greek, said the Goddess of Philosophy first descended upon “the Indians, the mightiest nation upon the earth.”

Referring to the “miraculous” identity between Hindu and Greek philosophies Olcott adds: “....that the views of the Aryan sages should be so identified with those of the later Greek and Roman philosophers as to seem as if the latter were to the former like the reflection of an object in a mirror to the object itself, without an actual, physical transmission of teachers or books from the East to the West, is something opposed to common sense.”

Here the “actual physical transmission of teachers” from the Orient to which Olcott refers as a *sine qua non* for the development of occidental/Greek philosophy is a fact of history. In fact, the flow of scholars was multi-directional. For the Hindus went to Greece, the Greeks came to India, and the two also met at international centres of intellectual interaction. Indologists Max Muller, Garbe, Winternitz *et al* agree that “centuries before Christ there were in Persia, Asia Minor and Alexandria seats of learning which were visited, among others, by Greeks and Brâhmanas from India, who played an important part in the intellectual fellowship promoted by these centres, where Indian ideas were most popular.” (*India Abroad.*) Max Muller goes further to assert on the authority of Eusobius that Brahmins from India used to visit Athens around the time of Socrates, and even adds they were present in Greece as teachers.

Historically speaking, although the flow of philosophical ideas intensified only after Alexander’s invasion (326 BC), the process had started before him. Even in the early period “Indian speculation and the Indian view of life were not uncongenial to the people of Europe....Much before the invasion of Alexander links between India and the West had been forged....and Indian religions and philosophical ideas had permeated the West, writes B. M Pendse in his contribution to *India’s Contribution to World Thought and Culture.*

➤ Pythagoras

Among the Greek greats of philosophy thus nurtured on 'Wisdom from India' the most ancient on record was Pythagoras, who lived in mid - 6th century BC. But even before him, as after, direct contacts between Hindu philosophers and their Greek disciples had been taking place. To quote Voltaire: "The Greeks before the time of Pythagoras turned to India for instruction." On the other hand many post-Pythagorean scholars of Greece came to India to be educated in Hindu philosophy. To this Pythagoras was no exception. Leaky in his *History of European Morals* quotes an old tradition in Greece that Pythagoras had come to India and learnt philosophy. Going beyond the legend, Apollonius, the most distinguished "Pythagorean" of a later period, accepts it as a historical fact that Pythagoras had visited India two centuries before Alexander's invasion.

Pythagoras stands very high in Greek religion, which, says Ram Swarup in *On Hinduism*, has a "family likeness with Hinduism". Naturally this likeness was reflected in his philosophy in ample measure. In fact it can be legitimately asserted that Pythagoras founded his philosophy on the Hindu philosophical system *Sāṅkhya*. Others have put it slightly differently, saying India was the birth-place of "Pythagoreanism". Pythagoras's biographer Iamblicus says that after studying esoteric teachings including those of Brāhmanas Pythagoras propounded the theory of *metem-psychosis* – the transmigration of the soul from one body to another. This theory first appears in the *Brāhmanas* and the *Upanishads*. In fact, "almost all the theories, religious, philosophical and mathematical, taught by the Pythagoreans were known in India in the 6th century BC. While, interestingly enough, Pande gives this information in his article under the subheading "Pythagoras highly influenced by Vedantic philosophy", his adaptation of *Sāṅkhya* appears to have had wide impact on his peers and successors, for Indologist Garbe opines that a number of contemporary Greek philosophers like Heraclitus, Empedocles,

Anaxagoras, Democritus and Eprenrus were influenced by the Hindu *Sânkhya* doctrines of the “eternity and indestructibility of influenced matter” and the transmigration of the soul. (*India Abroad*.)

Pythagoras also taught the doctrine of the ‘Witness’, *drashtâ* of Hindu philosophy. He said “Life is like a gathering at the Olympic Games, where some people come to buy and sell, others to play, but the best of them to look on”. This is remarkably like the Upanishads’ *Ganda-Bherunda*, two birds on a tree, one eating its fruits and the other just looking on. The symbolism relates to the Witness Self of the Upanishads and the *Kûtastha* of the Gita. This ‘spectator’ doctrine holds a high place in Greek thought. Pythagoras’s premise of an “all-pervading soul” also is an “important attribute of the Hindu *âtman*”. (Ram Swarup.) He taught that the end of man is to “become like God” – a close paraphrase of *Shivo bhutvâ Shivam Yajet*.

Pythagoras not only believed in re-birth but, writes Ram Swarup in *On Hinduism: Reviews and Reflections* (Voice of India, New Delhi), claimed to have himself had many births when he “passed into several bodies according to the law of *Adrasteia*, whereby souls migrate.” (This is the name of Nemesis, Goddess of Retribution, derived from the altar erected to her by Adrastus.) Here Ram Swarup wonders – “Could it be the Hindu *adrishta* in the ultimate analysis?”

A remarkable feature of “Pythagoreanism” appears to be that in addition to expounding a particular system of Hindu philosophy it extended to living life according to the Hindu view of life and Hindu code of conduct as a whole. To this end Pythagoras imported from India the strictest code of discipline for his disciples. This code bears the imprint of Hindu India in every single rule. It laid down the following precepts: A mild and fruitful plant should neither be injured nor corrupted, nor in a similar manner any animal which is not noxious to the human race, and further still, that it is necessary to speak

piously and from proper conceptions of the divine, and a similar manner of parents and benefactors. That it is proper likewise to give assistance to law, and be hostile to illegality.

How Pythagoras's disciples lived their daily life by this code has been described in detail by German scholar Schroeder in *Pythagoras und die Inder* (Leipzig, 1884). Ram Swarup's *On Hinduism* also contains a graphic account of how Pythagoras and his followers lived by the ascetic practices he had learnt from the Hindus. Once, while explaining why he and Pythagoras stayed away from meat and used linen in their dress, Apollonius, the saintly Pythagorean of centuries later, said: Earth grows everything for mankind, and those who are willing to live at peace with the animals need nothing. But some "disobey the earth and sharpen knives against the animals to gain clothing and food." The Indian Brâhmans disapproved of this personally and taught the Naked Philosophers of Egypt to disapprove of it too. From there Pythagoras, who was the first Greek to associate with the Egyptians, borrowed the principle.

"He let the Earth keep living creatures, but held that what the earth grows is pure, and so lived off that because it was sufficient to feed body and soul. Clothing made from dead creatures, which most people wear, he considered impure; he dressed in linen and, for the same reason, made his shoes of plaited bark. He derived many advantages from this purity, above all that of perceiving his own soul."

All in all, Pythagoras had pre-eminent status in the field of Hindu-based Greek philosophy, which, curiously enough, may be suggested by a Sanskrit explanation of his name. (It is known that many names of people and places all over the world are derived or derivable from Sanskrit origins.) For according to D. S. Kulkarni in his book *India Abroad* the Sanskrit origin of the name Pythagoras was *Pita Guru*, "fatherly preceptor", while according to P. N. Oak in his tome *World Vedic Heritage* it was *Peeth Guru*, "Preceptor at the Seat of Learning".

Among leading lights of Greek philosophy, Pythagoras in the 6th century BC was followed by Socrates in the fifth and Plato and Aristotle in the fourth.

➤ **Socrates**

Both Socrates (469-359 BC) and his disciple Plato (427-347 BC) had contacts with Hindu philosophers. About Socrates, there is an interesting story of his encounter with a Brahmin visiting Athens. On meeting Socrates the Brahmin asked him: "What was the scope of your philosophy?" "An inquiry into human phenomena," replied Socrates. At this the Hindu burst out laughing and said, "How can a man inquire into human phenomena when he is ignorant of divine ones?"

Still it seems Socrates's contact with Hindu philosophers may have made his thinking too revolutionary for contemporary Greek society. For Urwick writes in *The Message of Plato*, "The quest of life and faith of Socrates were as un-Greek as anything could possibly be; that was one of the reasons why the Greeks killed him. The essence of his life belonged to a world unknown."

➤ **Plato**

Plato, a disciple of Socrates, was a great admirer of the Pythagorean school of philosophy. He is said to have been in India for some time while on a cultural tour of Asian countries. There are many parallels in the Upanishads and Plato, and, says Ram Swarup, "these similarities are not fortuitous."

Plato's ideas of the bondage of the Soul to Matter and its liberation therefrom are distinctly Sâṅkhyan. Says Hopkins: "Plato is full of Sâṅkhyan thought worked out by him but taken from Pythagoras." His use of the simile of the charioteer and the horse reminds one of the comparison in the *Katha Upanishad* "of the body with a car, the soul with a charioteer, the senses with the horses, and the mind with the reins." Urwick believes that almost all of what

Plato said in his *Republic* is only a restatement of Indian ideas. Plato's division of the ideal polity into Guardians, Auxiliaries and Craftsmen is nothing but the Hindu caste system in another garb. (*India Abroad.*)

H. G. Rawlins also cites examples from *Republic*, some of which are reminiscent of *Karma* or metempsychosis besides the Vedantic doctrine of *Mâyâ*, Illusion. (*The Legacy of India*, Oxford, 1962.) According to him Metempsychosis (transmigration of the soul), "with the complementary doctrine of *Karma*," is "the keystone of the philosophy of Plato." Also significant in this context is the Orphic legend in Greece about the origin of the universe "in the body of Zeus after he had swallowed Phanes, the offspring of the great 'Word Egg'." The resemblance of this legend with the Brahmanda (in *Manu Smriti*) is, according to Rawlinson "too close to be accidental".

Platonic metempsychosis had apparently dominated a large body of Greek philosophers. It included the earlier-mentioned Heraclitus, Empedocles, Anaxagoras, Democritus and Emprenrus. Pherecydes, who taught at Ephesus, preached the doctrine of re-birth and must have had some knowledge of the soul transmigration theory.

➤ **Aristotle**

About Aristotle (d. 322 BC), not much is on record about his direct interaction, if any, with Hindu philosophers, but it is known that his royal disciple Alexander had great respect for Hindu wisdom, and obviously this must have been the result of his mentor Aristotle's teaching. It is a common legend that at the time of his invasion of India Greek philosophers had asked him to bring "wise men" from India, and he had made special efforts to find out and take with him some Hindu ascetics or *gymnosophists* on the return journey.

According to *A Complete History of the Druids*, "Many persons are of opinion that the religious principles of the Druids were similar to those of the *Gymnosophists* and Brahmins of India,

the Magi of Persia and the Chaldeans of Assyria....” It then describes the Gymnosophists thus: “The Gymnosophists were philosophers who went naked, and lived solitary and austere lives in caves, woods and deserts, feeding on herbs and for a time abstaining from carnal pleasures. They were also called Brâhmans....that is, of Brachman or Bramba, the prescriber of their rites or laws. They were very learned men held in great reverence by the people and had a strong idea of the Trinity....First, Bramba, by this He created the universe, second, Breschan, by this He preserves it, third, Mahaddia, by this He will destroy it.”

Alexander’s arrival in India marked “the earliest significant meeting of East and West on the level of an attempt at philosophical exchange”. (Strabo’s *Geography*.) It is on record that an Indian sage by name Kalanos went with him. The names of other ascetics who agreed to accompany the returning Greeks have also come down to us. Conversely there were many eminent Greeks who participated in this exchange. For instance, Pyrrho, founder of the Greek philosophical school called Scepticism, had accompanied Alexander’s expedition to acquire knowledge of Indian philosophy.

➤ Apollonius

Even after the advent of Christianity this free flow continued for an appreciable period of time. In the early Christian centuries “we find Apollonius and Plotinus looking towards India as the home of Wisdom”, says R C Majumdar in *The history and culture of the Indian people*. Apollonius of Tyana (c. 50 AD) is said to have visited a Yogi’s Ashram in Kashmir and stayed as a guest at Takshashila to study under Brahmin preceptors, while Plotinus (205-270 AD), founder of Neoplatonism, went to the extent of accompanying Emperor Gordion’s expedition against Persia hoping to reach India where he could study the wisdom of the East. “In Plotinus, the procedures preparatory to ecstasy were remarkably similar to those of Buddhism and various Brâhmanic systems”. (Charles Eliot,

Hinduism and Buddhism, London, 1957.) Also significant in this context are the close resemblances between Neoplatonism and Vedanta and Yoga systems.

Ram Swarup's *On Hinduism* contains an interesting account of Apollonius's discipleship of a Yogi whom he calls Iarchus: The latter asked him, "What knowledge do you think we have that you lack?" Apollonius replied, "It is my opinion that your ways are wiser and much more godly. But if I were to find among you nothing I do not know, I would also have learned that there is nothing further for me to learn." Iarchus told him: "You, our visitor, have (already) a share of this wisdom, yet not all of it." Then the teaching began. What this teaching was is not known. However, Apollonius's biographer relates many interesting anecdotes. He tells us that in their very first meeting Iarchus told Apollonius everything about him, his ancestors, his journey, and the people he met. Apollonius was amazed. He asked the Indians if they knew themselves, expecting them to be like the Greeks in thinking it is difficult to know oneself. But to his surprise Iarchus replied, "We know everything because we begin by knowing ourselves. None of us would approach our kind of philosophy without knowing himself first." Apollonius had no difficulty in accepting this statement, for it was also his own belief. He asked Iarchus what they thought they were, and the latter replied: "Gods," And why? "Because we are good men," Iarchus said. (Here it is relevant and significant to note that both Iarchus and Apollonius were saints, and the word *saint* is derived from the Sanskrit *Santah*, which is the plural of *sat*, which means "a good man".)

Later on in his life, when he used this doctrine before the Emperor of Rome when he was being tried for instigating treason, Apollonius also told him that Iarchus and Phraotes, the two Indians, "are the only humans whom I consider Gods and worthy of being called so." He was so highly impressed with the Hindu philosophers that when he left India he wrote to them that they had shown him "a path through heaven". He said "he would recall all this (what the

Hindus taught) to the Greeks.” He often spoke of these wise men to his audience later on in his life. To the Egyptians he said: “I saw the Indian Brāhmans living on the earth and not on it, walled without walls, and with no possessions except the whole world.”

Apollonius’s idea of a spiritual life was the same as that of the Hindus. He believed spirituality belongs to purified *buddhi*, and it was native to man. So he distrusted those who hawked revealed truths. He once advised a Roman Emperor, Euphrates, to “avoid the kind (of people) that claims to be inspired. People like that tell lies about Gods.”

Ram Swarup calls Apollonius “perhaps the greatest saint of the Hellenistic world”. He was a great ascetic, and “a great name throughout the Pagan world”. Caracalla (211-216) erected a shrine to his memory, Apuleius ranked him with Moses and Orpheus included him among his household Gods. He was also a contemporary of Jesus. But precisely because of these facts Apollonius became a hated name among the Christians. They could not believe that there could be such a great ethical and divine character outside the Christian fold. While there were those “who regarded him as equal of Jesus”, among the early Christians he acquired the name of Antichrist.

Referring to Apollonius and his times, GRS Mead writes: “The highest probability, if not the greatest assurance, remained that even prior to Apollonius there was some private knowledge in Greece of the general ideas of the Vedānta and Dharma, while in the case of Apollonius, his one idea seems to have been to spread abroad among the religious brotherhoods and institutions of the Roman Empire some portion of the wisdom which he brought back with him from India.”

At the end of the first and during the first half of the second century AD, among such mystic associations as the Gnostic and Hermetic schools, there were ideas that strongly remind one of the theosophy of the Upanishads or the reasoned ethics of the *Sutras*,

adds Mead. Apollonius visited such schools and discussed there at length on Indian wisdom.

The *Gnosticism* doctrine prior to Apollonius to which Mead refers is an example of perceptible Hindu influence on Greece's / Europe's philosophies. It was a "know-thyself-movement" emphasizing the need to try to understand "who am I?" It was a philosophical thesis advocating that salvation can come through knowledge of the self, and not through external rituals. This is very similar to the Hindu doctrine of self-realization.

In the development of Gnosticism, which has been described as "Orientalism in a Hellenistic mask", Sâmkhya-Yoga played a distinct part. As a matter of fact Gnosticism "was a deliberate effort to fuse Christian, Platonic and Oriental ideas at a time when syncretism was particularly fashionable" (Rawlinson), and the great Gnostic teacher Basilides "definitely borrowed his philosophy from the wisdom of the East, which he interweaves in an ingenious fashion into the framework of Christianity". (Albrecht Weber, *The History of Indian Literature*, reprinted Varanasi, 1961.) In the views of Corporites and Basilides are incorporated the doctrines of *Karma* and *Skandhas*, and the fundamental idea of the Gnostics. "The knowledge of God, or Gnosis, is clearly similar to the Jnâna Kânda of the Hindus." (Rawlinson.)

Clement of Alexandria (150-218 AD) refers in his *Stromateis* to Brahmins and Buddhists and to the doctrine of soul transmigration (Arnold Toynbee, *A Study of History*). Then there was Bardesenes (155-238 AD), a well-known Gnostic teacher, who wrote a book on Indian religions. (Toynbee.) In 278 AD Archelos, Bishop of Carrha in Mesopotamia, stated that "Terebinthus proclaimed himself learned in all the wisdom of the Egyptians, and assumed the name Buddas (Buddha)." This was one of the earliest examples of a Buddhist 'convert' in the West. "Terebinthus was the disciple of Scythianus, a widely-travelled man who had acquired knowledge of Indian

philosophy during his visits of India.” (J. W. McCrindle, *Ancient India as Described in Classical Literature*, 1901.)

During the early centuries of the Christian era Buddhism had followed the westward track left by the Upanishadic teachers. Alberuni (957-1030 AD) tells us that “in former times Khurasan, Persia, Iraq, Mosul, the country upto the frontiers of Syria was Buddhistic. When king Gushtasp came under the influence of Zarathushtra’s religion the Buddhists were persecuted. When their “prophet” Mani (216-276 AD) was banished from Iranshahr, he migrated to India, the usual asylum for those who faced religious persecution at home. Here he learnt the doctrine of transmigration and incorporated it into his own philosophical system. Later, through Manichaeism and other parallel channels it became part of early Christianity. Thus, by a quirk of history a cardinal principle of Hinduism entered Christianity *via* Buddhism.

Apart from philosophers and scholars, one of the earliest among the Western “enquirers” coming to an Indian sage for answers on religious-philosophical matters was king Menander or Milinda (c. 115-90 BC), one of the greatest Indo-Greek kings. After meeting Bhikshu Nâgasena he not only got answers to all questions agitating his mind, he got “converted” to Buddhism. Another Greek ruler Agathocles (2nd century BC) took pride in calling himself a *Hinduja*, meaning a “Hindu by birth”. (Nilkanta Sastri, Ed. *Comprehensive History of India*, Orient Longman, 1957.) He struck silver coins with Krishna’s image on them. These coins are on display in museums. (P. N. Oak, *World Vedic Heritage*.)

With such a long-standing and active interaction between Greek and Hindu intellectuals and thinkers it was inevitable that various schools of Greek philosophy should show perceptible Hindu influence. Thus, apart from Apollonius’s neo-Platonism there was Scepticism of Pyrrho, mentioned earlier, and Stoicism of Zeno. And, like Pythagoras, “Orphic mysteries” (the mystique preached by

Orpheus) stood high in Greek thought. Also, like Pythagoras, they have a recognisable “family likeness” with Hinduism. Orphic mysteries taught release (*lysis*) from all material entanglements, which is close to *Moksha* (liberation) of the Hindus.

➤ **Anti-Christian ‘Heresies’**

Here it is interesting (but not surprising) to note that all these Greek philosophical systems were condemned by early Christianity as heresies. During the period 300-500 A.D. the Church developed a doctrine which justified the use of force to compel obedience. This doctrine was needed and used for violent suppression of heresy. *Heresy* comes from the Greek *hairesis*, meaning choice. In the early centuries there was much to choose from within Christianity, and consequently many heresies and heretics – Gnostics, Marcionites, Moutanists, Arians, Sabellians, Nestorians, Monophysites, the Copts in Egypt, the Jacobites in Syria, and the Orthodox Church of Armenia. (*Dark History of Christianity.*)

In the final analysis they all harked back to the core of Hindu philosophy, the Upanishads and the Gita, from the very beginning. Says Bhikshu Chamanlal, “According to Greek scholars themselves there are phrases in the oldest treatises of the Trismegistic Hermetic (mystic) literature which can be so closely paralleled with phrases in the Upanishads and in the Bhagavad Gita, that one is almost tempted to believe the writers had some acquaintance with the general contents of these Brāhmanical scriptures.” (*Gita* was translated into Greek by Demetrios Galianos.)

All in all, writes Kulkarni in *India Abroad*: “Ancient Greece was greatly indebted to India for many of her best ideas in philosophy....and intellectual culture, as also for many of her....spiritual wonders.” No wonder; for, adds Kulkarni, “in fact, between the year 1500 to 500 BC the Hindus were so far advanced in religion, metaphysics, philosophy....no other nation could stand their equal.”

Summing up the situation, Raghunandan Prasad Sharma in his *Vishwavyâpi Bharatiya Sanskriti* (Hindi) points out in brief the many clear reflections of Vedic / Hindu philosophy in the thinking of Greek philosophers thus : God is one; the deities we worship are just different aspects of divinity. (Herodotus.) God and the manifest world are basically one. (Xenophanes.) God is one, but he has three different names – Jupiter, Neptune and Plato; an old statue of Jupiter is shown with three eyes. (*Tri-netra*.) There are three worlds; Gods live in heaven, demons in the middle world, and men on earth. (Pythagoras.) The whole world will come to an end one day, and out of its remains a new world will come into being. (Plutarch, Orpheus etc.) Re-birth is a truth. (Pythagoras.)

➤ **Roman Philosophy**

About Roman philosophy David Frawley writes in *In Search of the Cradle of Civilization*: “We may detect India’s influence in the teachings of the Roman Stoics, such as Seneca (mentor of Emperor Nero), and Emperor Marcus Aurelius. This emperor’s book *Meditations* still makes for thought-provoking reading today, and elicits in the student of India’s wisdom echoes of the Upanishads and the Bhagavad-Gita. To furnish only one example : “Take pleasure in one thing and rest in it, in passing from one social act to another social act, thinking of God.” Does this not strongly call to the mind the Karma Yoga, or Yoga of self-transcending action, taught by the Divine Krishna to his human protege, Prince Arjuna?”

➤ **Edda / Veda**

The Upanishadic core of Hindu philosophy also finds a clear reflection in the ancient Scandinavian scriptural poem *Edda* – which name itself has such a noticeable resemblance to *Veda* as to indicate its Sanskrit origin. In a picturesque description of its philosophy of Creation the *Edda* says:

*There was in times of old
Nor sand not sea
Not gelled waves
Earth existed not,
Nor heaven above.
It was a chaotic chasm
And grass nowhere.
Then the Supreme ineffable Spirit willed
And a formless chaotic matter was created.*

This is clearly a rendering of the opening statement in *Brahmânda Purâna*, and it also immediately points to the following hymn of the *Rigveda*:

*There is only one Being who exists
Unmoved yet moving swifter than the wind,
Who far outstrips the senses, though as gods
They strive to reach Him, who, Himself at rest
Transcends the fleetest flight of other beings
Who, like the air, supports all ritual action.
He moves not; he is far yet near.
He is within this universe, and yet
Outside this universe; whoe'r beholds
all living creatures as in him, and Him,
the universal spirit as in all,
Henceforth regards no creature with contempt.*

(According to Oak, "similar pre-Christian Anglo-Saxon ballads are preserved in a manuscript in the Exter Cathedral in England.)

With the advent of Christianity, writes Ram Swarup, "darkness descended on the Mediterranean World." "The new religious cast of mind" was "incapable of understanding deeper things of the spirit; it understood dogmas and creeds; it dropped the law of *Karma*, the theory of the Self. Greek philosopher Antonius (4th Century

AD) predicted that “a fabulous and formless darkness is about to tyrannize over all that is beautiful on earth.” (*Encyclopaedia of Religion and Ethics*.)

Still Hindu philosophy remained an attraction throughout even when Europe was getting confused and swept off its feet. Hindu Thought continued to exert influence on Europe through various channels. One such major channel was the works of Greek philosopher Dionysius. Dionysius’s works were translated by John Scotus Erigena, a Christian intellectual of the 9th century. He questioned the presence of Christ in consecrated bread and wine. He exalted Reason above Biblical and clerical authority. He said God was neither masculine nor feminine, that God as “Father” merely meant that he was the creative substance or essence of everything. “Son” merely meant the divine Wisdom according to which all things are made or governed, and “spirit” merely meant life and vitality of creation. This was the dissolvent of the whole Trinity. He also said heaven and hell are not places, but conditions of the soul. He further said all things are immortal, that animals too, like men, have souls that pass back after death into God or the creative spirit from whom they emanated.

This was heresy for Christian intolerance, the defining trait of Semitic faiths. So in 865 Pope Nicholas wrote to Charles the Bald to either send John to Rome to stand trial or dismiss him from the Palace School, “that he may no longer give poison to those who seek for bread.” What then happened to him is not known, but, according to William of Malmesbury, John “came to England and to our monastery” where he “was pierced with iron pens of the boys whom he instructed” and died from the results. Four hundred years later, in the thirteenth century, his book *De divisiones naturae* was condemned by the Council of Sena (1225) and Pope Honorius II ordered that all the copies be sent to Rome and there burnt. (Will Durant, *The Age of Faith*.)

Despite this dark past there are present-day European thinkers who are dazzled by this transcendental reach of Hindu philosophy.

Among them Count Biornstierna is the most unreserved. In *The Theogony of the Hindus* he writes: "In the field of Metaphysics we find among the Hindus all the fundamental ideas of these vast systems....the principles of Pantheism, Spinogism, and Hegelianism, of God being one with the universe; of the eternal spirit descended on earth in the whole spiritual life of mankind, of the return of the emanative sparks after death to their divine origin, of the uninterrupted alteration between life and death. All this we find among the philosophers of the Hindus....In respect of philosophy the Hindus were far in advance of the philosophy of Greece and Rome, who considered the immortality of the soul as problematical....The Egyptians derived their religion, mythology and philosophy from the Hindus and the Greek philosophy too was indebted almost wholly to the Hindu philosophy....the resemblance between them is too close to be accidental. The Hindus, being far more advanced, must have been the teachers and the Greeks the disciples...."

➤ **German Admiration**

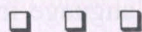
The Germans went even further in their praise of Hindu philosophy. Thinker and author Schopenhaur (1788-1860) declared that "in the whole world" there was no study "so elevating as that of the Upanishads". Philosopher Augustus Schlegel goes almost lyrical in his *History of Literature* when he writes: "Even the loftiest philosophy of the Europeans, the idealism of reason as is set forth by Greek philosophers appears in comparison with the abundant light and vigour of oriental idealism like a feeble Promethean spark in the full flood of heavenly glory of the noon-day sun, faltering and feeble and even ready to be extinguished." Going even beyond this with an unabashed acknowledgement of the divine heights that Hindu philosophy scaled he declared in *Wisdom of the Ancient Indians*: "It cannot be denied that the early Indians possessed a knowledge of God. All their writings are related with sentiments and expressions, noble, clear, severely grand, as deeply conceived in any human language in which men have spoken of their God." Another

philosopher, Herder, a friend of poet Goethe, held that the “tender Indian philosophy”.... could not but ennoble mankind. Schelling (1775-1854) considered the Upanishads the oldest wisdom of mankind. He placed them above the books of the Bible, which “can in no way be compared, as regards real religious feelings, with....especially the sacred writings of India.” Paul Deussen calls the Vedanta system the greatest achievement of the genius of mankind in search of eternal truth. According to him German philosopher Kant gave a scientific sub-structure to Vedanta, which Hindus had formulated by intuition.

About the philosophy of Dialecticism of Marx and Hegel, Thengadi says it was first envisaged and systematized by Kapil Muni. As regards Marx’s Materialism, which had been first enunciated by Democritus, its first *sutra* was written by Patanjali – “Out of non-existence emerges existence.”

According to Adi Shankaracharya the phenomenon that is the world has to be explained according to two systems: One exoteric, theological for the common man who wants helping gods, a cult of images and elaborate worship, and the other an esoteric, philosophical monism for the few, who are able to grasp the metaphysical Truth. For Deussen this doctrine of the two forms of Truth “is the way out of the embarrassments of theologians and deserves not only the attention but also the imitation by Christian dogmatists.” (S. D. Kulkarni, *India Abroad*.) Finally, even the music composer Beethoven had studied the Hindu approach to life and had translated passages from the Upanishads and the Gita.

A fitting footnote to the German admiration for Hindu philosophy is that The International Centre for Vedic Studies in Germany plans to establish a Vedic university in Berlin. The Centre’s Executive Director Kaltos Ruheil made this announcement during a visit to India in 2008. “There is an urgent need to train young leaders the world over in human values as envisaged by the Vedas and to meet the needs of the fast-changing international community,” Ruheil said.



5. Jurisprudence

ICONS, temples, and scriptures (along with the language in which they are written) are evident, recognizable signs of the imprint Hindu influence has left on the world. At the same time there is also a subtle, less apparent, side to this influence. An instance in point is the fact that many countries in the world, including those of Europe, have borrowed their principles of jurisprudence and fundamentals of justice from the ancient Hindus.

In the Sanskrit play *The Little Clay Cart* written by Shudraka more than 2000 years ago, the playwright gives an outline of the judicial system that prevailed in India long before the advent of the Christian era. The actor (judge) soliloquizes thus:

*How difficult our task! To search the heart,
To sift false charges, and elicit truth !
A judge must be well read in books of law,
Well skilled in tracking crime, able to speak
With eloquence, not easily made angry,
Holding the scales impartially between*

*Friends, kindred, and opponent, a protector
of weak and feeble men, a punisher
of knaves, not covetous, having a heart
intent on truth and justice, not pronouncing
judgement in any case until the facts
are duly weighted, then shielding the condemned
from the king's wrath, and loving clemency.*

This is a beautiful description of a judge's qualifications and qualities, and the high standard of dispensing justice he must follow. He must apply the law with complete neutrality, yet his judgement needs to be tempered with mercy so as to mitigate the effects of the rigours of law. Quoting these lines from the play in his extensive article in *Liberty*, the scholarly journal he edited, Britain-based Vedic scholar Dr. Anwar Shaikh observed: "The legal and judicial standards which were practised in ancient India are rarely matched even in modern times".

These lofty tenets were enunciated in the Rig-Veda, whose antiquity goes back to 6000-7000 years, and codified by Manu in *Manu-Smriti* or *Mânava-Dharma-Shâstra*, generally known as the laws of Manu. Manu himself makes it clear that those laws have a Vedic base. To give a few quotes from chapter 12: "The Veda is the eternal eye of the ancestors, gods, and humans...." "All doctrines, good and bad, that are outside the Veda are based on darkness...." "The supreme good of man is the knowledge of one's self, which is inspired by the Veda". "A man who knows the true meaning of the Vedic teaching becomes fit for union with the ultimate Reality even during his life on this planet..."

➤ Custom

According to Shaikh, the basis of the Laws of Manu is the body of customs developed by the Vedic people in their way of life over a period of time. Says *Manu-Smriti*: "He (the King) should ordain as the law whatever may be the usual custom of good, religious, twice - born men, if it does not conflict with the custom of countries

(i.e. regions), families and castes”. (Ch.8:46) Admiring this clause as “really stunning”, Shaikh says it is “so brilliant that it contains germs of modern law-making: It states categorically that it is not the King’s will that is the law of the region but it is its custom that carries the legal authority. Again, evil customs must be discontinued, and only good customs shall be chosen for this purpose”.

This is the origin of what has come to be called common law in the West in modern times. By custom is meant a general practice of a region that has become a significant habit. Initially common law was based on what had become customary in the country at large. To give the law of the land a national character customs of wider application were incorporated in common law, minor customs as well as evil ones were ignored.

The Law of Manu, says Anwar Shaikh, has great jurisprudential significance, because in keeping with it Western jurists realized that—

- ❑ A custom, to rank as law, must have been enjoyed as of right, peaceably, continuously and uninterruptedly from time immemorial, and
- ❑ The custom must be reasonable, certain, and obligatory. A custom that would be practised at will could not form the basis of law.

In most European countries the legal systems were mainly of customary origin, which were enlarged nationally to satisfy the legal needs of the country as a whole. This traditional basis of law is to be seen in the legal history of Ireland, the Aryan land. According to Sir Henry Maine, the old Brehon Laws of Ireland were Aryan. Brehon was the name of an ancient Irish judge. Brehon law was the name given by the English to the system of jurisprudence in use among the Irish from an ancient period till the 17th century.

As for the Common Law of England, Anwar Shaikh holds that the Laws of Manu, mainly originating in the Vedas, show that it is clearly rooted in the Aryan traditions of India. *Manu-Smriti* bears

this fact out when it lays down: “Women should witness for women, and twice-born (high-caste) men for twice-born men who are like them....” This means trial of like by like, that is, people of a certain class can be tried only by members of the same class.

➤ Peers

During the 14th century the English parliament frequently resorted to this principle known as “trial by peers”. It meant that Lords must be tried by Lords, commoners by commoners, and the clergy by the clergy. During the reign of Richard II (1377-99) the Lords used this doctrine effectively to impeach some fellow-Lords, eventually causing the downfall of their monarch. (Anwar Shaikh, *The Vedic Civilization*, Principality Publishers, Cardiff, UK, 2003.)

Beginning, thus, with codifying the people’s own enduring common customs and thus ensuring their willing obedience to laws thus formed, *Manu-Smriti* went on to make laws that truly exhibit legal splendour. To quote a couple of shining examples: “No father, teacher, friend, mother, wife, brother, son or personal priest should go unpunished by the king (judge) if he fails in his duty.” (Ch.8.335.) Since a king or judge is the pillar of justice, he ought to deserve much greater punishment than an ordinary person. “If a common man, guilty of an offence, is liable to be fined one small coin, the king must be fined a thousand, and this rule must be observed strictly. (ch.8.367)

➤ Proportion

A law of Manu that “the most civilized country could have produced” (to quote Shaikh) says “punishment should be proportionate to crime: The king should impose a fine strictly in proportion to the amount of pain caused to a man or animal.” (Ch.8.287.) The great significance of this law lies in the fact that even today many countries do not appreciate its wisdom and fairness. They believe in sadistic and retributive punishment. For instance, Islam prescribes amputation of hands for theft. The Laws of Manu

do not permit undue severity in carrying out punishments. Manu says: "When the King has accurately ascertained the motive and the time and place, and has considered the strength of the criminal to endure punishment and the offence itself, he should then inflict punishment on the guilty." (Ch. 8, 127.)

In *Vedic Civilization* Anwar Shaikh points out that some laws of Manu are actually and "incomparably ahead of most legal codes even today." For instance: "When a part of the body has been injured, a wound inflicted or blood shed, (the attacker) must pay (the victim a sum equal to) what it costs to restore him to health, or he may pay the whole (cost to the king) as a fine." (Ch. 8, 287.) Again, "The King must give back to men of all classes the property taken by thieves; a King who converts it to his private use becomes guilty of theft." (Ch. 8, 40.) Modern jurisprudence too requires that the offender makes good all the losses that he has caused to the victim, but this principle has not been acted upon anywhere except a few European countries.

➤ **Contract**

Laws of Manu specify 18 causes of legal action, which touch all aspects of societal activity. Among them, there is a comprehensive law of contract that is as modern as can be. It says: "A contract is not valid until it is entered into by a person who is entitled to do so; an unauthorized person or someone who is drunk, mad, in agony, totally dependent, a child, or an old man cannot enter into a legal contract."

➤ **Widow Remarriage**

A Vedic law that clearly shows Vedic influence on the Middle Eastern culture and the Reformation that took place in Europe relates to widow-remarriage. It is as follows: ".... who brings you homeward as the widow bedward draws her husband's brother, as the bride attracts the groom." (RV X: 40.2) Manu explains this hymn as follow in ch. IX, 69-70: "If the (would be) husband of a woman dies when

their promises have been given verbally (that is, when even in modern times, she becomes a *vâk-datta vadhu* on the *vâk-nishchaya*, oral betrothal, being performed), her own brother-in-law should have possession of her.” Further, “when she...has made an unpolluted vow he should have intercourse with her according to this rule, once during each of her menstrual period, until there is a child.”

Here there is a remarkable similarity with the Law of Moses (Deut. 25:5.6): “If brethren dwell together, and one of them die, and have no child, the wife of the dead shall not marry without unto a stranger; her husband’s brother shall go in unto her and take her to him to wife, and perform the duty of a husband’s brother unto her.” And “It shall be that the first-born which she beareth shall succeed in the name of the brother who is dead...” Shaikh’s comment: “These Vedic and Mosaic laws are in essence one and the same.”

Execution of this law had forced Henry VIII of England to wed Catherine, his brother’s widow. He hated this marriage, but the Pope would not allow divorce. To sever his marital relationship Henry became a Protestant, causing a big upheaval in Churchdom. “The Church of England is the child of this law.” (Anwar Shaikh, *Liberty*.) Sheikh also referred to another law of Manu which “was rigorously followed in Rome and Greece, and even their laws of mixed marriages, that is, patricians marrying the plebes, free men marrying slave girls, were similar. The rights of their children were similar to the rights that prevailed in the Vedic society in India.”

➤ Wergild

Another ancient European law with Vedic roots is Wergild. It is said that wergild is an older Germanic law practised by Anglo-Saxons and early Franks and denoted the amount of compensation that a person paid to an injured party or to the survivors if he caused someone’s death. Usually these damages were assessed in relation to the social status of the victim, and constituted an informal payment. The wergild of a feudal lord, a priest, a woman, a commoner – they

all varied. In Germany a part of wergild was payable to the King or Lord. A form of wergild known as “wite” was a fine that criminals had to pay to the King as atonement for their misdeeds. This legal custom continued in Europe until the 11th century.

Wergild is mentioned in the Rig Veda:

*“And yet full many one, unpaired, mean
niggard is entitled Man:*

Only in weight is he such.” (RV V:61.8)

This slightly unclear Rigvedic hymn is explained by Manu thus: A mean, niggardly person may not ordinarily expect any reward or bounty, but as compensation for manslaughter even such a person is entitled to receive, or required to pay to those whom he wronged. In appreciation of this clause Anwar Shaikh comments: “The beauty of this Vedic law emerges when it equally applies to the State whose foremost duty is held to be the protection of people’s life and property”. To repeat a quote from Manu: “The King must give back to men of all classes property taken by thieves.”

➤ **Ordeal**

Finally, the Vedic conviction that divine power would ensure the triumph of right led to a process of trial or judgement called Ordeal. Scholars trace it to Rigvedic hymn CL VIII (Book I) where one Dirghatamas had been subjected to the ordeals of fire, water and single combat with a man called Traitana, and “preserved in all three by the Ashvinas.” Another similar case of one Vatsa was also mentioned. *Manu-Smriti* states this law clearly: “The king should make him (the suspect) carry fire, or have been immersed under water....If the flaming fire does not burn him and the water does not raise him up, and he experienced no harm at all, he should be acknowledged as true to his oath of innocence.” (In Ramayana Sita’s Ordeal by Fire, *Agni Divya*, had proved her chastity.)

Ordeal was part of the process of trial, in which, says Manu: “The suspect was required to speak the truth on oath, a priest had

to swear by the truth, a ruler by his horse, chariot and weapons, and a commoner by his cows, seeds and gold....” In Shaikh’s opinion “this Vedic doctrine, no matter how tough, helped mankind evolve codes of law.”

It was indeed in vogue in medieval Europe, where Ordeal was based on the belief that a sympathetic action of the blood causes it to flow at the touch or nearness of the murderer. Anwar Shaikh holds that Aryans migrating from their Vedic homeland took it with them to all new lands where they settled. In fact, during their westward emigration they took with them their Vedic Doctrines, including the Laws of Manu, “which eventually flourished into western civilization.”

➤ **Modern Updates**

Finally, how even apart from *Manu-Smriti* Hindu legal thought contributed to the making of laws that have stood the test of time was recently revealed when the Supreme Court of India turned to *Mimâmsâ* to settle a cause in 2008. *Mimâmsâ*, founded by sage Jaimini, is one of the six main *Darshanas* or systems of Hindu philosophy, and mainly deals with the correct interpretation and settlement of debatable points in Vedic texts. The Supreme Court’s legal recourse to it was all the more remarkable in view of the fact that most laws currently in force in India are still patterned on the British model followed by Macaulay & Co. to draw up the legal codes for British India.

The case in point related to deciding which of two legislations would apply in resolving disputes between companies producing electricity and their licensees. The two legislations in question were the Electricity Act, 2003, of Gujarat and the Arbitration Conciliation Act, 1996. The first is a special legislation, whereas the second is general. Governing the choice of which legislation should apply were sections 174 and 175 of Electricity Act, 2003. The Supreme Court Bench of Justice Markandeya Katju and Justice Sema noted that

the *Mimâmsâ* principle, “created for resolving the practical difficulties in performing *Yajnas*,” would be useful in resolving the dispute before them. The learned judges further observed, it was regrettable that while lawyers in our courts often quoted western authorities, nobody refers to *Mimâmsâ*, which is “(our) intellectual treasury.” The Bench applied the *Guna-Pradhân* axiom of *Mimâmsâ*, whereby the principal idea is to hold precedence over any subordinate one. Should a subordinate idea clash with the principal one, the former should be adjusted to latter or disregarded altogether. In the case before them the Bench determined that section 174 was principal and Section 175 subordinate. Therefore, it decided that, in accordance with section 174, the special legislation (Electricity Act, 2003) would be the law of choice. Justice Katju elaborated that the performance of *Yajnas* was governed by rules in texts called the *Brâhmanas*, such as *Shatapath Brâhaman*, *Aitareya Brâhmana*, *Taittiriya Brâhmana* and so forth. To resolve discrepancies between them the principle of *Mimâmsâ* was drawn up. Justice Katju observed:” Although the *Mimâmsâ* principles were created for religious purposes they were so rational and logical that subsequently they began to be used in law, grammar, logic, philosophy.”

Finally, it needs to be pointed out that *Manu Smriti* is not just a legal code but a code of conduct for everyone in a civilized society. In recognition of this fact many modern western scholars have praised *Manu Smriti* as having revolutionized sociology. German scholar Nietzsche said, close the Bible and open the *Manu Smriti*. Even the Vedas, which *Manu* calls his original source, contain precious principles of sociology: Adam Smith’s division of labour was present in the caste system from Vedic times in India. It provided that all people should get jobs, and for all jobs there should be men to do them. There was no uncertainty. Even the widow and the old were provided work. Even in *Vânaprastha Ashram* men continued to work as teachers till 75 years of age.

□ □ □

6. Language

SANSKRIT is the original source of all the European languages of the present day," writes Mons Dubois in *Bible in India*. This truth has a hoary history. *Dâsharājnya*, the Rigvedic "battle of ten kings" fought around 6000 years ago, has been described in earlier pages as the starting point for the massive westward migration of Vedic Indians. This migration took place in successive waves that continued for centuries. The Purāṇas, which are the historical texts of the Rig Veda, clearly state that major sections of the Druhyus, who had fought in the *Dâsharājnya* and had been defeated, emigrated after their defeat to distant lands to the North.

➤ Celtic

Those among them who spread to regions practically touching the borders of Europe, and whose name was Europeanized from Druhyu to Druid, in course of time came to be known as Celts and the language they spoke came to be

called Celtic. Even in those hoary times the territorial expansion of the Celtic population must have been formidable, for the Celtic language underwent adaptation from region to region, finally becoming a group of half a dozen Celtic languages spoken in a land mass stretching from the Black Sea to Britain. (Hutchinson Encyclopaedia.) Even in later, historical, times the Celtic spread had covered the western border of Europe, which is proved by the fact that during the last some centuries before the Christian era Celtic was spoken over a wide region of the continent from Spain to Britain.

Actually, the Indian ancestry of the Celtic language predates this demographic dispersal of the Druhyus. Although there were ten peoples who together fought the Battle of Ten Kings against King Sudâsa, collectively they had two group names – Anu and Druhyu. The languages they spoke had split into two broad categories, called Satem and Kentum, in their original Vedic/Indian homeland itself, the Anu speaking the Satem dialects and the Druhyu the Kentum ones. With the westward spread of the Druhyus the Kentum group evolved into proto-proto-Indo-European languages, some of which became extinct, like Latin, while others developed into extant, spoken languages, like English. This link between ancient migration and evolved languages has been described by Godfrey Higgins in *The Celtic Druids* in graphic words: “The affinity between the Greek, the Roman, and the Celtic languages....is perfectly consistent....in that a singular stream of emigration flowed from some great nation in the East to the West, irrigating....with small streamlets the countries at the side of its course.”

Alongside this international spread of the Vedics, the Vedic civilization at home kept expanding extensively in India, leading to a magnificent flowering of Vedic culture and refinement. This in turn led to the development of the Vedic language, called Chhanda, into a “refined” (*sanskrit*) language. This language, Sanskrit, brought Hindu knowledge to Europe.

Will Durant calls Sanskrit the *Hindu* language, as also “the mother of Indo-European languages”. In the light of recent research by Indian scholars that has been briefly outlined above, it would be truer to say that Sanskrit is not only the mother of Indian languages but a copious source for European languages as well.

➤ Greek

Sanskrit language and literature have left a lasting imprint on Greek. Archaeologist J. Princep wrote in 1838 : “We might almost dare to advance that the oldest Greek was nothing more than Sanskrit turned topsy-turvy.... There is nothing new nor very unnatural in the hypothesis, since the connection of the Greek with the Phoenician and Sumerian alphabets has been admitted as strong evidence.”

The Sanskrit language, said Sir William Jones, founder of the Asiatic Society, is “more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either.” Both these languages have borrowed from Sanskrit liberally enough to reveal their historically Sanskritic background.

In the case of Greece, this history starts with the statement in the Mahabharat that the descendants of Yayati’s son Turvasu were the Yavanas. From *Yavana* originated the name *Ionia*, and the Yavanas are generally identified with Greeks of Ionia. Ionia is a region in Asia Minor, and there is evidence indicating that Vedic peoples migrated to Asia Minor after they established themselves in Iran. As Asia Minor is contiguous to Iran, the Ionians seem to have owed their language and culture to a two-fold influence – the Indian and the Iranian. Greeks from the north-west are also said to have migrated to Ionia, but this happened after Vedic influence was well-established, and they were linguistically and culturally absorbed by the Vedics from India.

The most ancient Greek work, Homer’s *Illiad* (about 900 to 800 BC), is in the Ionian language, which was partly influenced by the language of Turvasu, that is, Sanskrit, and partly by Avestan, the

Zoroastrian language which is only a phonetic variant of Sanskrit. This Ionian-Sanskritic language was the mother of the Greek language. Since then the presence of Sanskrit in Greek became so clear and acceptable even in ancient times that Sanskrit words can be found in the writings of eminent Greeks like Ptolemy, Arrian, and Strabo.

From then on, the verbal presence of Sanskrit in Greek became so pervasive that for some Western scholars the two languages became mother and daughter. Jacolliot, renowned French author of *The Bible in India*, wrote, "The Sanskrit formed the Greek". Pococke in *India in Greece* went further and wrote, "The Greek language is a derivative from Sanskrit." His significant footnote to the situation: "Sanskrit was the language of Pelasgic and Hellenic Greece". The chronological significance of this observation lies in the fact that while the "Hellenic" period of Greek history extended "from the primitive epoch to the Roman supremacy in Greece, beginning from 146 B.C.", the "Pelasgic" period went even further back in time, for Pelasgic is an adjective "pertaining to the Pelasgians or Pelasgi, a race spread over Greece in prehistoric times". (*Chambers's Twentieth Century Dictionary*.) In fine, Sanskrit has been present in Greek since antiquity.

➤ **Latin**

Along with Greek, Vedic Asia Minor was also the cradle of Latin. Probably as a consequence of the break-up of the Vedic Hittite empire of Mesopotamia, a people later known as Etruscans first appeared in the Etruria region of Italy around 900 BC, from where, during succeeding centuries, they spread to other Italian regions including Latium, the birth-place of Latin. It was the Etruscans who introduced into Rome not only Greek culture in general but also an alphabet. Later, due to the political dominance of the Roman Empire, Latin became the common language of Europe for centuries. This in turn spread Sanskrit roots to languages throughout Europe. Thus, if,

as it seems, the Etruscans were of Hittite stock, Hittite, the oldest-known clearly Sanskritic language outside India, was in all probability the source language for Latin.

➤ English

This source-language phenomenon becomes especially noticeable in a study of the etymology of English words. For instance, the words in the *Concise Oxford Dictionary* (9th ed.) are stated to have generally Latin roots and frequently Greek roots. As a matter of fact, in numerous such cases the evolved English word or the Latin/Greek root has such a striking resemblance to a Sanskrit word, both phonetically and in respect of meaning, as to clearly suggest that the root of the given word is Sanskrit. There are hundreds of such words. In addition there are at least a thousand words in this dictionary where the prefix or suffix is derived from Sanskrit.

Reputed Sanskritist N. R. Waradpande is currently engaged in compiling a full-fledged dictionary of Sanskrit-based English words, and he is confident of identifying 10,000 such words. Webster's, the multi-volume English dictionary, is said to have 40,000 words described as "akin to Sanskrit". In fact, asserts Dr. Waradpande, one-fourth of the total English vocabulary is Sanskritic.

Even pure Sanskrit words are current in English. The following are some of the Sanskrit words that are included in the *Concise Oxford Dictionary of English* in their pure form and with the same meaning: *Avatâra, Brahmâ, Devanâgari, Guru, Hinayâna, Hindu, Kalpa, Kâma Sutra, Karma, Mahârishi, Mahâtma, Mahâyâna, Mantra, Mâyâ, Nirvâna, Pandit, Râja Yoga, Samâdhi, Shiva, Swami, Swastika, Vishnu, Yoga, Yogi.*

Among affixes used in the English language perhaps the most common are the prefixes *non-* and *over-*. *Non-*, the English/French/Latin prefix, is derived from the Sanskrit *na/no*, meaning 'no'. *Navneet Advanced Dictionary* has given about 550 English words

using this Sanskrit-derived prefix. The *Concise Oxford Dictionary* says the number of English words using this prefix is “unlimited”. *Over -*, another common prefix, is derived from the Sanskrit *upari*, meaning *above/upon, excessive/extra*. *Navneet Advanced Dictionary* has given a list of 170 words using it. *Concise Oxford Dictionary* contains about 270 English words formed with this prefix. Interestingly enough, while prefixes and suffixes are generally attached to words, there are even proper names of places in Britain that have Sanskrit-derived suffixes. For example, *-bury* in place names like Canterbury means “town”, and *-ness* in place names like Caithness means ‘promontory’, ‘nose’. *Bury* is clearly derived from *Puri*, Sanskrit for ‘town’, and *-Ness* from *Nâsâ*, Sanskrit for ‘nose’.

Words with History: An especially interesting feature of the English language is words with history. Quite a few English words have not only a Sanskrit origin but also an etymological Hindu history. A few examples: *Abba* means ‘father’, and is derived from Sanskrit *Appa* – âp, ‘water’ + pâ, ‘to drink’. There is a Hindu ritual to offer water to the father after his death, which he is supposed to drink. So *Appâ*, ‘drinker of water’, means ‘father’. *Allopathy* is an allied development as a branch of ancient Indian medicine which prevailed in Europe and other parts of the world till about the end of the 18th century. *Allo* means “a learned borrowing” from the Greek word *allos*, meaning “other”, so *Allo-pathy* is borrowed from ‘the other’, that is, from the ancient Indian system of medicine, Ayurveda. *Bane*, meaning ‘a curse’, has an interesting Hindu mythological background. Ancient king Prithu-Vainya was considered the original Arya king, because he started the practice of agriculture. He is thus honoured as the founder of the Arya (‘agricultural’) civilization. ‘Vainya’ means ‘son of Vena’. King Vena, however, was a tyrant, and was called a curse on Dharma. So ‘bane’, derived from ‘Vena’, came to mean ‘a curse’. *Brahmin* is a remarkable example of how not only a Sanskrit term but even the Hindu concept underlying it has become established

in the English language. In his magnum opus *Kane and Abel* best-selling British novelist Jeffrey Archer frequently uses this term to denote a particular class of the society or its style of speech or accent. The *Concise Oxford Dictionary* explains *Brahmin* as “a socially or culturally superior person”.

Butter is said to have been derived from Sanskrit in a curiously round-about manner. According to *Periplus*, a Greek merchant's chronicle of his sea-voyages, written in the first century A. D., “Larsen, Oppert and others, following a mention of *boutyros* by Theophrastus, identified it with Asafoetida, by way of Sanskrit *Bhutâri*, which means ‘the enemy of evil spirits’.” Thus, out of a confusion between the products asafoetida and clarified ‘butter’, the words *butyron* in Greek, *butyrum* in Latin, and *butter* in English could have been derived from the Sanskrit word *bhutâri*.

Elephant is actually a combination-word with Sanskrit and Arabic roots. It has three componens, *al-ibha-danta*. *Al* is Arabic for ‘the’, while *ibha* and *danta* are Sanskrit, meaning ‘elephant’ and ‘tooth’. The English word *ivory*, meaning ‘elephant’s tusk’, has a related etymology. The Hebrew word *habbin* is derived from *ibha*, as also the Egyptian word *abu*. This becomes *ebur* in Etruscan (a successor of Vedic-Sanskritic Hittite) and *eboreum* in Latin, finally becoming *ivory* in English.

Indigo is derived from the Greek word *Indikon*, which means “from India”. Proof exists that Indigo was made and used to dye cloth in ancient India. *Tamarind* is derived from the Latin *Tamarindus Indica*, which in turn is derived from the Arabic *Tamr-Hindi*, which means ‘dates from India’..

Yahweh is a ‘tetragrammaton’, that is, the Hebrew name of God written in four letters. In the original Hebrew version of the Old Testament the four letters YHWH were used for the words ‘God’ or ‘Lord’, because God never identified Himself with the word ‘God’. The *Exodus* says; “And Moses said unto God, Behold, when I come unto the children of Israel and shall say unto them, the God

of your fathers has sent me unto you, and they shall say unto me. What is his name? What shall I say unto them? And God said to Moses, I AM THAT I AM: And he said, Thou Shalt say unto the children of Israel I AM has sent me unto you.” Thus it became the Jewish tradition to use the tetragrammaton YHWH. Christians simplified it (at least one Bible scholar says “bastardized” it) into ‘Yahweh’ so that they could pronounce it. The Jewish concept of God as ‘I AM THAT I AM’ is a close copy of the Hindu concept of God as *Aham Brahmâsmi*, “I am the Cosmos,” and *Soham* (*Sah+Aham*), “I AM THAT”.

Prometheus of Greek mythology was the first fire-giver, he who brought fire from heaven. He is *Pra-mantha* of the Rig Veda. In the Greek language *Prometheus* means ‘foresight’. The Vedic Atharvana fire was conceived in the brain and actually produced by rubbing (*manthana*) together two hard objects.

Elsewhere in Europe, remarkably enough, the influence of Sanskrit is seen not only in the vocabulary but even in the grammar.

➤ **Hungarian**

In Osoma De Coro’s preface to the Tibetan Dictionary that Hungarian scholar observes about Sanskrit: “To his own nation he feels a pride in announcing that the study of Sanskrit will be more satisfactory than to any other people of Europe. The Hungarians will find a fund of information from its study, respecting their origin, manners, customs, and language, since the structure of Sanskrit is most analogous to the Hungarian, while it greatly differs from the language of occidental Europe. As an example of the close analogy, in the Hungarian language, instead of prepositions post-positions are invariably used, except with the personal pronouns. Again from a verbal root, without the aid of an auxiliary verb, and by a simple syllable addition, the several kinds of verbs distinguished as active, passive, causal, desiderative, frequentative, reciprocal etc., are formed in the Hungarian in the same manner as in Sanskrit.”

➤ German

German too followed the Sanskrit grammatical system of seven cases and three numbers (singular, dual, and plural). “There is almost complete identity in the Sanskrit and German declension of nouns.” (P. N. Oak, *World Vedic Heritage*.)

➤ Lithuanian

In his book *Rigvedic India* Prof. Avinash Chandra Das says emigrants from India settled in various parts of Asia and Europe in ancient times. One of the proofs for this that he cites is the close affinity between Sanskrit and the Lithuanian language. Lithuanian has many words in common with Sanskrit. According to some scholars it is close to Avestan, but this affirmed its connection to Sanskrit, as Avestan is only a phonetic variant of Sanskrit. Mario Pei says in *Story of Languages*, “The modern (spoken) language which is supposed to be closest to the parent Indo-European speech,” is Lithuanian. Here it may be pointed out that there is no “Indo-European” language or group of languages but an Indo-Aryan family of languages with Sanskrit as the mother language.

In Vedic society the king himself seems to have been elected. His title *vis-pati*, meaning “Leader of the Community”, survives to this day in *wiezpaties*, a word in the Lithuanian language of Central Europe.

➤ Romany

Roma dialects, spread all over Europe, are an early phase of the Hindi language. In fact their basic vocabulary is the same as that of Hindi. There are also some Punjabi, Gujarati and Marathi words prevalent in the Romany language. Many instances of this close similarity can be easily quoted : nâk (nose), kân (ear), bâl (hair), yakh (ânkh, eye), dé (give), lé (take), jâ (go), khâ (eat), pî (drink), shoshoi (hare, from Sanskrit *shashakah*), yâg (âg, fire), rashai (rishi). Sacho rât means “true blood” (sachchâ *rakta*) and Rai and Rani stand for ‘gentleman’ and ‘lady’. The number count in Romany has

a clearly understandable Sanskrit base : ek (one), dui (two), treen (three), shatr (four), panch (five), shof (six), ifta (seven), aukto (eight), anya (nine), and desh (ten). The Roma even have Hindi place-names for towns.

In the Romany language of the European gypsies, especially those living in Britain, London is called *Baurigav* (*Badi-gaon*, 'big city') and Sheffield is known as *Churiesta-gav* (*Chhuri-gaon*, 'knife-town'). These are clearly derivatives of the Sanskrit *Brihat-gram* and *Chhurikâ-grâm*. The Romany name *Baro-thân* for India is also Sanskrit *Brihat-Sthâna*, 'big land'.

➤ Slovanese Languages

In general, many European languages, especially Russian, Polish, Czech, Bulgarian and Slovak, have a noticeably close relationship with Sanskrit. In fact how widely Sanskrit vocabulary had spread among European languages is shown by a small but significant example: The English word *Star* is derivable from two Sanskrit words – *stri* and the more common *târâ*, and *târâ* becomes *izarra* in Greek, Latin, Gothic, Anglo-Saxon, Welsh, Icelandic, Swedish, Danish, and Basque. (Incidentally, according to French scholar Lahovary, Basque is also remarkably akin to ancient Tamil. He has given more than 2000 words common to both.)

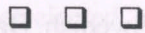
Making the same point, Alexander Walkner, who toured the Malabar area of Kerala during 1800-1820 AD wrote in his *Malabar Bibliography* : "The literature of Malabar has the same foundation and the same material as of the entire Hindu country. The original works are in Sanskrit, whose history is intimately connected with several of the present languages of Europe, including Greece and Rome, as also the numerous Gothic tongues."

➤ Other Languages

To sum up, in addition to the major languages – Celtic, Greek, Latin and English discussed in these pages, this writer could identify

Sanskrit root-words in the following 30 (old and current) European languages.

Albanian, Basque (language of people of Pyrenees on the border of France and Spain), Bulgarian, Cornish (ancient Celtic language of Cornwall in Britain), Czech (language of the Czech Republic / Bohemia), Danish (language of Denmark), Dutch (language of Holland), Etruscan (language of Etruria, ancient region of Italy), Finnish (language of Finland), French, Gaelic (old language of Scotland), Gaulish (old language of France), German, Gothic (language of the ancient Goth people of West Europe), Icelandic, Irish, Italian, Lettic (language of Baltic country Latvia), Lithuanian (language of Baltic country Lithuania), Maltese (language of Miderranean island Malta), Norse (language of Norway), Polish (language of Poland), Portuguese, Romany, Russian, Scots (language of Scotland in Britain), Spanish, Swedish, Tungus (language of Siberia region of Russia), Umbrian (ancient language of Umbria region in Italy), and Welsh (ancient Celtic language still spoken in Wales in Britain).



7. Literature

HINDU reflection in European literature even of the hoary past was first noticed in the ancient Scandinavian scriptural poem *Edda*, as discussed in earlier pages. The very name *Edda* has such a clear resemblance to *Veda* as to indicate its Sanskrit origin. Also, its description of Cosmic Creation closely follows Rigvedic cosmology.

➤ T. S. Eliot

The most remarkable fact about this Hindu philosophical content in a European composition is that it endured from long before the advent of the Christian era down to modern times, coming express again in the English poetry of Nobel Laureate T. S. Eliot in the 20th century. Eliot was born in America and educated at Harvard but later migrated to England. According to records at Harvard his English studies included portions from the Vedas and the Upanishads, the Gita, Yoga *Sutra*-s of Patanjali, Ramayana and Mahabharat. He had his

own copies of Deussen's *The Systems of the Vedanta* and *The Philosophy of the Upanishads* in German.

Eliot once remarked during one of his lectures in the U. S. that his studies in Sanskrit and Patanjali's metaphysics had left him "in a state of enlightened mystification". In another, while speaking on "The Unity of European Culture", he said: "Long ago I studied the ancient Indian languages, and while I was chiefly interested at that time in Philosophy, I read a little poetry too; and I know that my own poetry shows the influences of Indian thought and sensibility." (Herbert Howarth, *Notes on some figures behind T. S. Eliot*, London, 1965.) When once asked what books from Indic tradition had influenced him most, Eliot replied the *Upanishads* and the *Gita*. W. B. Yeats, another well-known English poet, said Eliot used James Wood's translations of Patanjali's *Yoga Sutra*-s like a dictionary.

T. S. Eliot "ultimately turned to Indian philosophy for the full flowering of his poetic genius." (S. D. Kulkarni, *India Abroad*.) And "he made no secret of his debt to the classical Indian sources for his theme, symbolism, visual metaphor of his poems. The exalted mystic concepts of the *Upanishads* such as Time, Timeless, Temporal and Eternity; asceticism, self-denial, detachment and renunciation, stillness and withdrawal; the cyclic nature of Creation and Existence are drawn upon profusely and used by Eliot in his mature poems, especially in *The Waste Land*, *The Choruses from The Rock*, and *Four Quartets*....and also in his poetic play *Murder in the Cathedral*." "Apart from these, his critical essay *Traditions and Individual Talent* is a classic which shows obvious evidence of the impact of Patanjali's *Yoga-Sutra*-s in evolving his own principles of literary criticism, the concept of poetic consciousness, and the process of creation in the mind of the poet." Eliot concludes *The Waste Land* with the *Upanishadic* pastiche *Datta, Damyata, Dayadhvam*, and also clearly incorporates the *Gita*'s message of *Karma Yoga* in other compositions. In *The Four Quartets* he writes, "Do not think of the fruit of action, Fare forward," and in *Choruses from The*

Rock again he writes. "I say, take no thought of the harvest, But only of proper sowing."

Between *Edda* and T. S. Eliot, two memorable European expressions of Hindu Thought that are so distant from each other in point of time, stretches a whole history of appreciation, adaptation and translation of Hindu works, ranging in subject from high philosophy to children's stories, into various European languages. As, over the centuries, oriental sources were opened to writers of the West, "translation, paraphrase, direct imitation, subtle adaptation – all processes were used by them with respect to the Eastern texts they found." (S. D. Kulkarni, *India Abroad*.)

➤ **Ramayana, Mahabharat**

At the top of their discoveries were the Ramayana and Mahabharat. The influence of these two immortal Hindu epics had spread as much to the West as to the East. In Europe the ancient Greeks were so impressed with their lofty contents that Demetrius Galianos translated the Gita into Greek. On the other hand, "the *Iliad* of Homer," wrote Bhikshu Chamanlal, "is nothing but an echo of an enfeebled souvenir of the Ramayana." It has so many noticeable similarities with Ramayana that R P Sharma has given a regular list of them in his book *Vishwavyâpi Bharatiya Sanskriti*. According to Pococke a study of the *Iliad* shows that the contemporary social system portrayed in it was patterned on the Indian system. In general, Ramayana and Mahabharat are the sources of the Homeric poems, observes Harbilas Sarda in *Hindu Superiority*.

Niti Literature

A couple of centuries later Homer was followed by what is known as the *Niti* Literature of Sanskrit. This consists of wise sayings, maxims and aphorisms that have been very popular in India from times immemorial. These were usually collected in what are called *Subhâshita Sangraha*-s, "good sayings in verse form". Monier-Williams in his *Indian Wisdom or Examples of the Religious*,

Philosophical and Ethical Doctrines of the Hindus described these “sayings of worldly wisdom, the *Niti* Literature of India” as “charming allusions to natural objects and domestic life, with occasional striking thoughts on the nature of God and the immortality of the soul, as well as sound ethical teachings, in reality a storehouse of practical good sense.” These wise sayings were often bound together by stories and came to be called *Kathâ* works. It is even possible that the best-known *Kathâ-s* were composed in order to build up more and more *Subhâshita Sangraha-s*. This may have been the case with the *Panchatantra* and *Hitopadesha*, the famous *niti* works of ancient India, which are in reality *Subhâshita-Sangrahas* joined together with different animal stories.

These wise stories spread abroad in all directions, where they became so popular that it can be legitimately claimed that ancient India is probably responsible for most of the fables that have, like an international currency, passed across the frontiers of the world. Giving this literary phenomenon a global perspective Sir William Jones observed that the Hindus laid claim to three inventions: Chess, the Decimal System, and Teaching by Fables.

Panchatantra, the most celebrated work in Sanskrit *niti* literature, is so called because it comprises five sections, each dealing with one particular *tantra* or code of conduct. It was taught by a wise teacher by name Vishnusharma to the idle and stupid sons of king Amarshakti of Mahilaropa at his request. The princes became educated and well-behaved due to the moral impact of these fables on them.

Hitopadesha, as well-known as *Panchatantra*, is also a collection of moral fables. They were composed in prose as well as poetry by Narayana, a court Pandit of king Dhavalachandra of Bengal. *Hitopadesha* has borrowed its story material partly from *Panchatantra* and partly from *Kamandakiya Nitisâra*. As in the case of *Panchatantra*, *Hitopadesha* too was composed for the education and edification of the king’s sons.

Niti literature in Sanskrit began to find its way into the West as early as the 6th century B.C. Its translations make interesting history, for it was a process that stretched over centuries, with one translation leading to another and the second leading to a third.

➤ **Panchatantra**

The *Panchatantra* is “one of the most-translated works in world literature.” (Swami Harshânand, *A Concise Encyclopaedia of Hinduism*, Ramakrishna Math, Bangalore, 2008.) Its first known foreign translation was done in Pehlavi in 570 A.D. The same year the Pehlavi text was rendered into Old Arabic, which in turn was the basis of all the translations and adaptations into European languages that were done during the period AD 1080 to 1678. From this source a Greek translation was made in the 11th century, from which in turn one Italian, one German and some Slavonic translations were made. The same Old Arabic translation led to a Hebrew translation in the 12th century and a Latin translation in the 13th. Again from this a German translation was made in 1483 A.D. The Latin translation also led to one Spanish and two Italian translations, and from one of the Italian translations came the French and English translations. In 1142 A. D. a Persian translation was made, which in turn was the basis of translations into several European languages – Georgian (South-East Europe), French, Swedish, English, German, Dutch, Hungarian. In the 13th century a second Hebrew translation was prepared from the Arabic translation. *Hitopadesha* too had consistently remained popular over the centuries, and, in addition to being translated into several Indian languages, has been translated into 13 foreign languages.

Yet another most interesting work in *niti* literature is *Shukasaptati*, which was “several times translated into Persian under the titled *Tutinâmâ*, and through it many Indian stories found their way to Europe.” (Radhakant Mukherjee, *The Culture and Art of India*, London, 1959.) Among them the well-known story of

the two jackals, Karkataka and Damanaka, is a typical example of translations from translations. It was translated into Pehlavi in the 6th century, Arabic in the 7th, and then into Latin, Hebrew and Spanish. Most of these fables and stories, if not all, were “ultimately woven into the very web of European literature” and “Indian motifs continued to be utilized even in medieval Europe.”

According to H. G. Rawlinson in *Intercourse between India and the Western World* the story of the Judgement of Solomon is an excellent example which “may have reached Judea along with ivory, apes and peacocks from Ophir.” The Indian stories of talking beasts etc. “began to find their way to Asia Minor as far back as the 6th century BC, and the earliest Greek version was attributed to Aesop, who is said to have lived at the court of Croesus of Lydia.”

As a sort of exceptional case, as late as the 17th century a Dutchman by name Abraham Roger translated *Panchatantra* directly from Sanskrit into German in 1630. He also produced a voluminous work titled *Open Door to the Hidden Paganism*, which contains a German translation of 200 maxims of poet Bhartrihari.

Shâkuntalam

In the following century German poet Goethe went into raptures when he read a translation of Kalidasa’s *Shâkuntalam*, and exclaimed: “Wouldst thou the earth and heaven itself in one sole name combine, I name thee O Shakuntalâ ! And all at once is said.” Goethe came into contact with this work in 1791 A. D. Years later, in 1840, he wrote to his friend Chezy, the Sanskrit scholar: “I grasp only now the overwhelming impression which this work formerly made on me. Here the poet appears at his highest, as the representative of the most natural state, of the most refined life, of the purest moral endeavour, of the most dignified majesty and the most solemn contemplation of God; at the same time he remains lord and master of his creation, so that he may dare to employ crude and ludicrous contrasts which still may be regarded as necessary

connecting links in the organized whole.” Writing about other Sanskrit poems in his letters Goethe specially referred to *Meghadûta* and *Gita Govinda*. Writing a little later in appreciation of *Shâkuntalam* another German scholar, Schiller, expressed the opinion that the whole Greek antiquity has produced nothing equal to the beautiful womanliness and the tender love that comes near to Shakuntalâ in any way.

Other distinguished Germans bonded with Hindu Thought in other ways. Friedrich Schlegel (1772-1829) with his “On the Language and Wisdom of the Indians: A Contribution to the Foundation of Antiquity” (1808 A.D.) threw light “on the hitherto obscure fields of the remotest Antiquity.” His younger brother August Wilhelm became the founder of Sanskrit philology in Germany. William Von Humboldt (1767-1835) had a fine understanding of Hindu philosophy, which he shows in his treatise on the Gita. He says of the Gita: “It is perhaps the profoundest and most sublime work which the world has ever known,” and said of his first reading of the Gita: “My permanent feeling was gratitude to the fate that I could live to read this work.” Friedrich Ruckert (1788-1865) was an accomplished poet and translated some Vedic verses, the Puranas and the Epics into German. He bestowed such great care on his translations that he recreated the rhythm and play in words of the original Sanskrit compositions.

➤ France

In France Prof. Sylvain Levy observed, “The wisdom of India consecrated by Greek and Latin testimonials excites curiosity.” The Sanskritist Chezy was an acknowledged master of the language and in recognition of his scholarship a Sanskrit Chair was created in the College de France around 1820 A.D. Earlier, in 1754, a young Frenchman by name Anquetil du Person, only twenty years old, became such a dedicated philologist and passionate admirer of Kalidasa’s *Shâkuntala* that he mastered the original with the sources

at his disposal and brought out the *Princeps* edition that is considered a definitive work.

➤ **Russia**

In Russian literature India had been a favourite theme for fables and stories since Alexander's time (4th century BC). However the first Russian translation of an Indian work was that of the Gita in 1787, translated from the English translation by Charles Wilkins in 1785. The first Russian to study Sanskrit was Gerasim Lebedev, who spent 12 years in India (1785-97) as a Clerk at Fort William. He published in 1801 his *Grammar of Pure and Mixed East Indian Dialects with Dialogues*. He cast the first Devanāgarī type and published in 1805 in Russian *A Survey of the Religions and Philosophical Systems in India*.

Count Uvarov was the founder of a permanent Chair for the study of Sanskrit in St. Petersburg, for which he selected Robert Lenz (1808-1836), who had studied Kalidāsa. He was succeeded by Pavel Petrov, who studied Sanskrit in Germany. He published *Sita-harana* in 1836. He took great interest in the spread of Sanskrit in Russia. The Sanskrit school of St. Petersburg became famous by the compilation of the *St. Petersburg Sanskrit Dictionary* in seven volumes during 1855-1875 A.D.

Like Sanskrit, India's ancient language, India's ancient literature had also influenced ancient literature in Russian and allied Slav languages. Russian archaeologists have convincing proof of close cultural relations between the peoples of Central Asia and India dating as far back as the Harappan period, so there are many references to India, her people and their culture in olden Russian literature. Although the image of India as a country of wisdom and wealth was found in almost all European literatures in the Middle Ages, it acquired some distinctive features in the literary works of ancient Rus, as it was known, especially its folklore.

In the early centuries of Christianity a stream of Greek and Bulgarian books poured into Russia by way of translations. Indian

names, motifs and concepts adopted in Byzantium several centuries earlier also reached Russia. The most ancient Russian chronicles are based on Byzantine chronicles. Information on India contained in these writings goes back to ancient times when the essay by Palladius on the *Races of India and the Brâhmanas* and its Latin translation by Ambrose appeared. Similar information is contained in another work well-known in old Russia – the *Chronographia* of John Malalas.

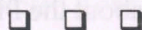
The Byzantine-Bulgarian influence brought Indian stories and Indian motifs to Russia. Stories by authors of ancient times about the wonders of India became an important source of the *Physiologus* widespread in Europe in the Middle Ages. In turn, the *Physiologus* and similar works had enormous influence on Russian ideas about India upto the 17th century, particularly on Russian literature. Stories about the Phoenix, the marvellous, mythical bird of India, were especially popular, as also those of another mythical bird Strafil Lostrich. There were also stories of a “quick-birth” stone and a “curing” stone which “cunning doctors” used. Incidentally, under the fantastic covering one may occasionally find echoes of realiable information about the exotic animal world of India and also about the medical knowledge of ancient Hindus.

While these literary developments took place in the 11th century, in the 13th century it was the story of *Barlaam* and *Josaphat* that became popular in Russia and spread to West Europe. It is a legendary biography of Buddha (‘Josaphat’ is derived from *Bodhisattva*) written by a Christian monk (who, typically enough for a missionary, even in those olden days, ends it with converting the young Buddha to Christianity). It was translated into Latin, Ethiopian, Slavic and other West European languages.

In the field of story literature, the popular Russian story *The Friend*, like other stories about evil spirits, has been traced to Indian sources. Another Russian story, *The Fox Wailer*, in which a fox is

described as wailing, is a variant of *Jack and the Beanstalk* but is said to be of Indian origin. W.A. S. Ralstone in his work *Russian Folk Tales* refers to a number of parallel stories in Russian and Indian traditions.

And finally a curious piece of India-related European literature was the story of the Indian Kingdom, which played an important part in the formation of Russian ideas on India. It is based on a letter said to have been sent by an Indian priest-king, 'Prestor John', to a Greek ruler by name Manuel Commenus. The 'Letter' appeared in Greek in the 12th century and in Russian in the 13th. It tells of "the far-off, fabulously rich country of India, where the rivers flowed from paradise itself....and there was a precious stone called emerald, and an abundance of everything, but neither a thief nor bandit, nor envious person."



8. Science

HINDU INFLUENCE on the ancient world, including Europe, which has left the most modern imprint is that of the amazing progress ancient Hindus had achieved in sciences ranging from Mathematics to Medicine and from Astronomy to Engineering. Hindu knowledge, in fact, was so all-encompassing that a Western savant declared: "It is now hardly to be contested that the source of all knowledge is to be found in India."

Grant Duff, legendary historian of British India, has noted that many of the advances in the sciences which we today consider to have been made in Europe were in fact made in India centuries ago. W. W. Hunter has written that those concepts which we discuss today in the field of science have been mentioned in ancient Indian scriptures ages ago. These scriptures begin with the Vedas, and the sweep of Vedic science is truly amazing. William Jones said, from the Vedas we learn sciences like surgery, medicine, engineering, mechanics and metallurgy. Wheeler Wilcox writes in *India*

Land of Vedas that they contain “facts which (modern) science has proved true,” such as “electricity, radiation, electronics, airships....”

➤ **Discovery of Fire**

Specifically, the beginning of science may be traced to the discovery of Fire by sage Atharvan who, through his intellect, conceived of and produced *agni*. Says the Rig Veda (VI. 16-13):

Awâmagné pushkarâdadyatharvâ

niramânthyata

Mûrdhno vishvasya vâghatah.

– “Oh Fire, the sage Atharva extracted thee from the lotus leaf. The sage through his intellect conceived and produced thee.”

Here the lotus leaf is the intellect in the head of the sage. With it Atharvan conceived the idea of rubbing two hard substances together to produce fire. He explained the method to his son Dadyanga, who then actually ignited the fire. (RV. 16-14.)

The Greek version of the origin of Fire, which has been mentioned earlier, is strikingly similar in an important respect. According to Greek mythology Prometheus ‘stole’ Fire from heaven (as in Rig Veda, *mûrdhno vishvasya*, “from the head of the universe”), and brought it down to earth. Apropos the etymology of the name ‘Prometheus’ *Chambers Encyclopaedia* says: “The religious history of fire is even more obscure than the history of its production, although everywhere we find that a rich mythology has gathered round the subject. Like the chief manifestations of natural forces, fire was early personified and worshipped, and we see a similar process of personification in the names of the first fire-givers – the Greek ‘Prometheus’, the “Pramantha” of the early Aryans, and his Chinese parallel Suy-jin.” Prometheus is thus the ‘Pra-mantha’ of the Rig Veda. In Greek the word ‘Prometheus’ means ‘foresight’. Atharvana fire was conceived in the brain and actually produced by rubbing (*manthana*) two hard substances. (*History of Science and*

Technology.) Here one may say that the Rigvedic reference is more scientific than the Greek, because instead of conjuring up a god or hero it described the actual process of producing fire.

➤ **Astronomy**

Hindu Astronomy is by far the world's oldest system of astronomy, from which the Greeks, Romans, Jews and Egyptians derived their knowledge. In fact even at its mythological stage it appears to have influenced other civilizations. For instance, astronomical elements in different mythologies show that Varuna (India), Uranos (Greece) and Osiris (Egypt) are identical in fundamental ways. All three deities were born to the Great Mother Goddess, and typically represent the night sky. More specifically, they symbolize the constellation of Orion, and their myths refer to the vernal equinox in that constellation, corresponding to the period from the 7th to the 5th millennium BC. This means Hindu astronomy goes back 7000 years.

Its advance as an exact science since those hoary times was so amazing that the motions of the stars calculated by the Hindus some 4500 years ago vary not even by a single day from the tables of Cassini and Meyer used in the 19th century. Also, "the Hindu tables give the same annual variation of the moon as that discovered by Tycho Brahe, – a variation unknown to the school of Alexandria and also the Arabs who followed the calculation of this school." While with this observation reputed French astronomer Bailley accords the longest antiquity to Hindu astronomy, Count Biornsteina expresses his amazement at its exactitude in *The Theogony of the Hindus* thus: "According to the astronomical calculations of the Hindus, the present period of the world, Kali Yuga, commenced 3102 years before the birth of Christ, on 20th February, at 2 hours 27 minutes and 30 seconds, the time thus calculated to minutes and seconds. They say that conjunction of the planets took place and their tables show this conjunction. Bailley also stated that Jupiter

and Mercury were in the same degree of the epileptic, Mars at a distance of only 8 and Saturn 7 degrees. The calculation of the Brahmins is so exactly confirmed by our own historical 'takes' (data) that only an actual observation could have given so correspondent a result."

Arabs made remarkable progress in the Middle Ages in Astronomy and Mathematics due to the stimulus they received from the study of ancient Sanskrit texts on these subjects. It was from the study of *Aryabhattiyam* that they learnt the division of the zodiac into 28 parts based on the lunar month. They translated the *Brahma-sphuta-siddhânta* of astronomer-mathematician Brahmagupta from Sanskrit and titled it *Sind-Hind*. They also translated another work called *kârana-khanda-khâdyaka* into Arabic under the title *Arkand*. Both Arabic titles are corrupt forms of the original Sanskrit titles.

All this knowledge the Arabs passed on to medieval Europe. (The term 'Aux' used in astronomical terminology in medieval Europe to indicate the highest point in a planet's orbit is derived from the Sanskrit word *uchcha*, meaning 'high'.) The discoveries and formulations of ancient Hindu astronomers like Varâhamihira, Brahmagupta, Mahavira and Bhaskarâchârya became known in Europe by the time of Renaissance.

However, there was one special concept, the earlier-mentioned concept of recurring *Yuga*-s, that had reached the west long before the medieval age in Europe. In Hindu astronomy this concept of a cosmic cycle in terms of 10,800 or 4,32,000 years is very important. An account of these numbers in relation to astronomical periods is found as early as in the *Shatapatha Brâhmana*. The figure 4,32,000 occurs in the later *Siddhânta*-s and even in Babylonia. The Babylonian astronomer Berossus (c. 4th century BC) speaks of a cosmic cycle of 4,32,000 years. Around the same time the Greek thinker Heraclitus (c. 5th century BC) had also conceived of a great

year in terms of 10,800 years. This Hindu concept is known to have influenced Greek and Babylonian astronomers.

For some major astronomical discoveries that have now become common knowledge the credit goes to ancient Hindu astronomers. Prominent among them are the earth's spherical shape and the heliocentric theory. The 'heliocentric theory' means the earth moves round the sun and not the sun around it. This was proved by Hindu astronomers one thousand years before Copernicus, to whom the discovery was ascribed. These astronomers had also formulated ideas about gravity and gravitation. Brāhmagupta said in the 7th century that "bodies fall towards the earth as it is in the nature of the earth to attract bodies, just as it is in the nature of water to flow." About a hundred years before Brahmagupta Varahamihir had asserted for the first time that there may be a force which keeps bodies stuck to the earth. Indian astronomers had also determined that in the movement of the heavenly bodies the earth's equinoctial and solstitial points are not stationary.

Aryabhatta was the first to propound the theory of the earth being a sphere in the 5th century. Brahmagupta estimated that the circumference of the earth was 5000 *Yojanas*. A *yojana* is around 7.2 km. Calculating on this equation his estimate comes to 36,000 km as the earth's circumference, which comes quite close to the actual circumference known today.

Incidentally, it is interesting to note here that the ancient Irish not only knew but also taught in school that the earth was spherical. Says Vallency: "It is a remarkable circumstance on record that when the rest of Europe, through ignorance or forgetfulness, had no knowledge of the true figure of the earth, in the 8th century, the rotundity and true formation of it should have been taught in Irish schools." "A plate of numerals from an Irish ephemeris now in my possession", he wrote in his book, "compared with those of the Indians and Arabs....are exactly the same."

Ebenezer Burgess, a missionary in India in the 19th century, was the first to translate *Surya-Siddhânta* into English. In open admiration of Hindu Astronomy's high antiquity and international influence he wrote: "The coincidences that exist between the Hindu and Greek systems are too remarkable to admit of the supposition of an independent origin for them. But the honour of original invention....lies, I think, between the Hindus and the Chaldeans. The evidence of priority and culture seem on the whole to be in favour of the former" (that is, the Hindus). "In reference to the so-called Greek words in Hindu astronomical treatises, I would remark that we may with entire propriety refer them to that numerous class of words common to the Greek and Sanskrit languages, which either came to both from a common source or passed from Sanskrit to Greek at a period of high antiquity." As for "the names of the five planets known to the ancients and the application of these names to the days of the week....do the claims of any people to the honour of having been the original inventors or discoverers appear to be better founded than those of the Hindus?" Here it needs to be mentioned that the Latin name for the planet 'Venus' is derived from Sanskrit Vena, the planet mentioned in Rigveda (X-123-7), while the Greek name 'Kupris' for this planet is derived from 'Shukra'.

As to the lunar division of the zodiac into 27 or 28 asterisms, "the undoubted antiquity of this division, even in its elaborated form, among the Hindus, in connection with the absence or paucity of such evidence among any other people, inclines me decidedly to the opinion that the division is of a purely Hindu origin."

Apropos the solar division of the zodiac into 12 parts, and the names of those parts: "The use of this division, and the present names of the signs, can be proved to have existed in India at as early a period as in any other country; and there is evidence....that this division was known to Hindus centuries before any traces can be found in existence among any other people."

“That the Arabians were thoroughly imbued with a knowledge of Hindu astronomy before they became acquainted with that of the Greeks is evident from their translation of Ptolemy’s *Syntaxis*. This great work of the Greek astronomer first became known in Europe through the Arabic version.”

“In the Latin translation of this version the ascending node is called *nodus capitis*, “node of the head”, and the descending node is called *nodus caudae*, “node of the tail” – which are purely Hindu appellations.”

“There has evidently been very little astronomical borrowing between the ancient Indians and the Greeks. And in relation to points that prove a communication from one people to the other,...I am inclined to think that the course of derivation was....from east to west rather than from west to east....I should be disposed to conclude that the Indians were in this instance teachers rather than learners.”
(*India’s Contribution to World Culture*.)

The ‘borrowing’ mentioned here later deteriorated into systematic loot of the treasure of Hindu knowledge in south India by a nexus between European missionaries and European scientists for as long as four hundred years. For during the period 15th to 19th century Madurai in south India had become a regular “European centre for the production of Indian mathematical and astronomical books and transfer to European scholars and scientists,” writes KV Ramakrishna Rao in a scholarly monograph published in the US journal *The Hindu Renaissance* (Yugâbda 5108). This centre was a Jesuit missionary base with various European connections. Even the notorious missionary cheat Roberto de Nobili had a science agenda. When he arrived in Madurai he saw an excellent university, where “10,000 Brahmins were learning different arts and sciences in groups of 200-300 under professionals.” He discussed ‘Kepler’s Laws’ (three theorems describing orbital motion) with Indian astronomers, collected from them many samples of crystals, and

sent them to Kepler. Another well-known European astronomer Tycho Brahe (1546-1601) mentioned that his collections had an astrolabe from India. (An 'astrolabe' is an instrument formerly used for astronomical measurements.) There were many others during the period 16th to 19th century who continued to collect materials (such as Hindu tables) and transferring them to Europe. Those who benefited from this borrowed knowledge included well-known figures like Kepler himself, Pope Gregory (of the 'Gregorian' calendar). Isaac Newton, and Jean Sylvain Bailley.

Likewise, Pondicherry, then a French colony, had a "French centre feeding European scholars and scientists," as Rao puts it. Here a Tamil astronomical manuscript was found at St. Joseph's College on which the date 1801 was written at the end, with the words: *Inda nidi karakkum tidi kanakkum 1801 tuvakki, varushandorum tavaramel, Ulaga mudiya mattum aryalam*. ("This calculation of days, months starts from 1801. With this one can calculate such days and nmonths for every year till the end of the world.")

➤ **Mathematics**

Vedic Origin: All mathematics originated in the Vedas. Its knowledge is contained in what are known as *Shulva Sutra*-s. *Shulva* means cord or string – obviously of specific length for use as a measurement device. Some important *Shulva Sutra*-s are by Boudhâyana, Âpastamba, Kâtyâyana, and others by Hiranyakeshin, Manu/Mânava, Varâha and Vâdhula. Among them those of Boundhâyana are the best-known and the most-mentioned. *Shulva-Sutra*-s are the oldest mathematical texts in the world, and are often called Vedic Mathematics.

On the other hand, while it is generally acknowledged that Vedic mathematics originated in the *Shulva Sutra*-s, there are scholars who assert an even more ancient Vedic source. According to them the first person to enunciate mathematical concepts was a Rigvedic

sage named Medhâtithi. He propounded the method of counting in tens and took it up to *parârdha* (billion). This, it is held, was the beginning of the decimal system.

Another Rigvedic seer by name Gritsamad offers a prayer to Indra in which he says: Come to us in your chariot by harnessing to it horses 2 in number, or 4 or 6 or 8 or 10 or 20 in number, 30, or 40, 50, 60, 70, 80, 90 or 100. Here it needs to be noted that in addition to using multiples of 10 he also uses uneven numbers below 10. In fact the numbers 2, 3 and so on “are scattered all over the Rigveda”. (S. D. Kulkarni, *History of Science, Art, and Technology*.) In Atharva Veda too sage Atharvan similarly arranges numbers from 4, 5, 6, 7 up to 20. In Yajurveda there is even a multiplication table – 4, 8, 12, 16, 20.... up to 48.

Medhâtithi composed more than 300 hymns of the Rig Veda, Yajurveda has the following specific names for the numbers he used: *Eka*: 1, *Dasha*: 10, *Shata*: 100, *Sahasra*: 1,000, *Ayuta*: 10,000, *Niyuta*: 1,00,000, *Prayuta*: 10,00,000, *Arbuda*: 1,00,00,000 (one *koti*/crore), *Nyarbuda*: 10 crore, *Samudra*: 100 crore or *Abja*, *Madhya*: 1,000 crore, *Anta*: 10,000 crore, *Parârdha*: one lakh crore. These names of numbers in the ascending order are given in the Yajurveda as well as in ascending decimal scale in *Pancha-Vimsha Brâhmana*. On the other hand the Greek terminology (which probably came into use by about the 4th century BC, was a myraid, 10^4 , that is 10,000, and of the Romans was *mille*, 10^3 , that is, 1,000. In the Classical Period Indians had developed terminology to express numbers as large as 10^{53} .

Medhatithi used these numbers in the powers of 10 in connection with the manufacture of bricks for altars for Vedic sacrifices. These altars were of various geometrical shapes, such as square, rectangle, circle, right-angled triangle, isosceles, isosceles trapezium, or rhombus. This also makes it clear that the mathematics in the *Shulva Sutra*-s involved a highly sophisticated brick technology. This was shown when, in April 1975, a 3000-year-old

Vedic sacrifice known as *Agnichayana* was performed for 12 days at Panjal in Kerala on a bird-shaped altar made up of a thousand bricks of various shapes and sizes. The media described it as a “geometrician’s delight”.

In later Vedic times mathematics was developed in Yajur Veda. The names of as many as 26 sage-mathematicians of this period are as follows: Prâsakanva, Devâtithi, Brâhmatithi, Vatsa, Punarvâta, Shadhavamsha, Smasakarna, Pragatha, Paravata, Nârada, Gosukta, Ashvasukti, Haramâmiti, Sumâri, Nipâtithi, Nâmaka, Trishoka, Pustigu, Shritigu, Âyu, Medhyâ, Mâtârishva, Krisha, Parashadharâ, Suparnâ, Kurusuti, and Kushidi.

In modern times a book titled *Vedic Mathematics* has been written by the late Sri Bharati Krishna Tirtha, Shankaracharya of Govardham Peeth of Jagannathpuri, and published by Motilal Banarasidass of Delhi in 1965. This book has been hailed by British mathematicians as a masterpiece. Three of them, fascinated by the Vedic mathematical formulae set out in it are reportedly exploring its potential. One of them, AP Nicholas stated during a visit to India in 1981 that it was already being taught in some schools in London. In his view this system has enormous potential for solving problems in geometry, applied mathematics, and modern astronomy. Ken Williams of the University College of London, who used the system for solving astronomical problems, could solve what is called Kepler’s Equation in 90 seconds. Williams, Nicholas and Dr. J. Pickles also used the book to solve their mathematical problems.

According to media reports a few years ago, a private TV channel in Ireland telecasts a programme on the teaching of Vedic mathematics, Sanskrit, and the epics Ramayana and Mahabharat for a Catholic school. The principal and teachers, all Irishmen, said by using Vedic mathematics one could do complex calculations with ease simply by looking at the figures. About Sanskrit they said they found its grammar to be the most scientifically designed of all major languages of the world.

➤ Geometry

In all probability Greece derived its mathematics from later commentaries on the *Shulva Sutra*-s. For while Greek mathematician-philosopher Pythagoras (6th century BC) is credited with enunciating the theory of right angles, Boudhâyana had already laid down in his *Shulva Sutra* that the diagonal of rectangle produces by itself both (the areas) produced by its two sides. In simple terms it means the square of the diagonal is equal to the sum of the squares of two sides. This so-called Pythagorean Theorem is contained in the description of *chaturasra syenachit* found in the Boudhâyana *Shulva Sutra*. Acknowledging that contemporary geometrical theories of Euclid were not advanced enough, Max Muller and other European thinkers believe that the “47th theory of Euclidean geometry” found in Boudhâyana was learnt by Pythagoras from Hindu mathematicians. Mathematician G. Milhand also accepts the possibility of the Hindu inspiration of Pythagorean geometry. According to Burke, Pythagoras had visited India about two centuries after Boudhayana *Shulva Sutra* was composed. Greek historians have supported this assertion. In fact, according to Greek tradition not only Pythagoras (500 BC) but Thales (546 BC), considered founder of Greek mathematics, as well as Empedocles, Anaxagoras, Democritus and others had also undertaken journey to India to study philosophy and science.

About Pythagoras *apropos* his theorem Dharmapal writes: “Pythagoras was certainly entirely incapable of acquiring the Indian method of calculation, through his deficiency of preparatory knowledge, and therefore could only get such general notions and principles of things as he was capable of understanding as the system of the universe, the idea of comets, the plurality of worlds, and the doctrine of transmigration.” (*History of Science and Technology*.) On the other hand, not only was the so-called Pythagorean theorem known to Boudhâyana 2700 years ago, both Boudhâyana and

Âpastamba have laid down equations from $3^2+4^2 = 5^2$ up to $15^2+35^2=39^2$. Kâtâyâna laid down rules for various measurements for a circle and a triangle.

As stated earlier, Hindu geometry originated in the need to design and construct Vedic sacrificial altars which were complex geometric designs demanding fairly sophisticated knowledge of geometry. Many such altars of the Harappan age have been discovered in a wide area stretching from Gujarat and U.P. to Baluchistan and Iran. This makes the *Shulva Sutra*-s the oldest mathematical texts in the world. According to A. Seidenberg, American mathematician and historian of science, Shulva Sutras are the source of all ancient mathematics in the world. Another eminent mathematician, Ali Beg, who has edited the Shulva Sutras, says tackling mathematical and geometrical problems with rational as well as irrational numbers (such as square root of 2) was a unique achievement of ancient Hindu mathematicians.

In an interesting latter-day development possibly related to international dissemination of Vedic geometry, new research reported in the British media in 2009 has revealed that prehistoric Englishmen used to steer their way across England using a navigation system based on stone circle markers. According to historian Tom Brooks, who studied all known prehistoric sites as part of his research, the findings showed that Britain's Stone Age ancestors were "sophisticated engineers". In fact, they were able to travel between settlements with pinpoint accuracy, thanks to a complex network of hilltop monuments built on a connecting grid of "isosceles triangles" that "point" to the next site. "To create these triangles with such accuracy would have required a complex understanding of geometry. The sides of some of the triangles are over 100 miles across on each side and yet the distances are accurate to within 100 metres. You cannot do that by chance, so advanced, sophisticated and accurate is the geometrical surveying now discovered." In his research Brooks analysed some 1,500 sites. These included standing stones, hilltop

forts, stone circles and hill camps. Each was built within eyeshot of the next. Using GPS co-ordinates, he plotted a course between the monuments and noted their positions to each other to find that they all lie on a vast geometric grid made up of isosceles triangles.

➤ Trigonometry

The Hindu origin of the branch of geometry called Trigonometry is revealed by its very name, as it is derived from the Sanskrit *tri-kona-miti*, meaning “measurement of a triangle”. Boudhâyana’s theorem is the basis of trigonometry, and its principles are given in his Shulva Sutra. Later Aryabhatta formulated the rules for finding the area of a triangle, which led to the development of Trigonometry.

The terms *sine* and *cosine*, frequently used in trigonometry, are also derived from Sanskrit. *Sine* stands for “the trigonometric function that is equal to the ratio of the side opposite a given angle (in a right-angled triangle) to the hypotenuse”, and *cosine* is “the ratio of the side adjacent to an acute angle (in a right-angled triangle) to the hypotenuse.” Both these terms are derived from Sanskrit – *Sine* from *jyâ*, *cosine* from *kotijyâ*. *Jya* means a “bow-string”, in turn meaning “the chord of an arc”, while *kotijyâ* means “the cosine of an angle in a right-angled triangle.” The etymological history of how *Jyâ* in Sanskrit became *sine* in the West makes interesting reading. First, *Jyâ* became *Jyab* in Arabic, where it came to mean “bosom or breast pocket”. In turn *Jyab* became *sinus* in Latin, where, continuing the clothing connection, it came to mean “a fold in a garment”, suggesting a curve, and finally *sinus* became *sine* in English for the curve- or arc-related function of a straight line. *Sine* can also be derived from the Sanskrit *jivâ*, as *Jyâ* and *Jivâ* mean the same thing – “bow-string” and “chord of an arc”. Aryabhatta found out the value of sine for the various angles from 0° to 90° and even prepared a table for it. In his famous mathematical treatise *Lilavati* Bhâskaraâchârya teaches his daughter Lilavati mathematics through simple everyday examples. All principles of trigonometry have been explained simply in this treatise.

➤ Arithmetic

Arithmetic was discovered by the Hindus around the 2nd century BC. While Bhaskarâchârya's treatise *Leelavati*, mentioned earlier, is considered the first book on modern mathematics, the *Encyclopaedia Britannica* states that in 499 AD Aryabhatta first systematized the "rules of Arithmetic".

Arithmetic has been defined as the "science of numbers", and all three fundamental inventions of this science – the numbers 1 to 9, the zero, and the decimal system – are Hindu inventions. The brilliance of these products of Hindu intellect has been acknowledged and praised by distinguished scientists and scholars of Europe and elsewhere. Einstein said: "We owe a lot to the Indians, who taught us to count, without which no worthwhile scientific discovery could have been made."

'George of Ifran' also writes in his *Universal History of Numbers*: "The real inventors of this fundamental discovery, which is no less important than such facts as the mastery of fire, the development of agriculture, or the inventions of the wheel, writing or the steam engine, were the mathematicians and astronomers of the Indian civilization."

Then, beginning with Laplace in the 19th century (and going backwards in time) he lists as many as 18 eminent mathematicians who have acknowledged with admiration the Indian origin of numbers. Among them J. F. Montucla (1798 AD) called numerals the "ingenious basis of modern arithmetic" which "originated in India." John Walls (1616), Cataneo (1546) and Willichins called them "Indian Figures". An archaic English mathematical tract titled *The Crafts of Nombrynge* (c. 1350) wrote: "...we use teen figurys of Inde.... Why zen figurys of Inde? For....thei were found frist in Inde." Petrus of Dada (1291) mentioned "Indian figures" in his commentary on algorithms, while Maximus Planudes (around 1252) wrote a work titled *Logistike Indike* ('Indian Arithmetic') in Greek. Very similar

references were made by Alexandre de Ville-Dieu (c. 1240) in a manual in verse and by Leonard of Pisa (1202) in a tract. Rabi ben Ezra (1092-1167) wrote a work in Hebrew titled *Sefer na Mispar* ("Number Book"), in which he used the first nine letters of the Hebrew alphabet to represent nine units, and explained the place value system "of Indian origin" thus: "This is how the learned men of India were able to represent any number using nine shapes which they fashioned themselves specifically to symbolize the nine units." John of Seville (around early 1100's), Robert of Chester (c. 1143), Juan de Luna (c. 1140) and Adelard of Bath (c. 1130) wrote or translated books on "Indian figures" and called their inventors "ingenious Indians". William of Malmesbury (c. 1125) wrote a similar book, in which he added that a monk by name Gilbert, who was to become Pope Sylvester II (d. 1103) learned Indian figures and contributed to their circulation in Christian countries of the West. In 976 AD a Spanish monk by name Vigila wrote a book on Indian figures, and before him the famous Al Khwarizmi (c. 783-850) popularized Indian numerals and mathematics in the Islamic and Christian world.

Commenting on the occident's oriental heritage in his monumental *The Story of Civilization* Will Durant writes: "Among the vital parts of our oriental heritage are the 'Arabic' numerals and the decimal system, both of which came to us, through the Arabs, from India. The mis-called 'Arabic' numerals are found on the rock edicts of Ashoka (250 BC) a thousand years before their occurrence in Arabia.... The decimal system was known to Aryabhatta and Brahmagupta long before its appearance in the writings of the Arabs...." Brahmagupta was also the world's first mathematician to treat zero as a number. Praising it in *Mathematics for the Millions* Lancelot Hogben wrote, "There has been no greater contribution than the one which the Indians made when they invented zero." According to a scholarly opinion, zero (*shunya*, "nothing") originated in the Hindu concept of a "void" or "blank", called *shubhra*, and from *shubhra* came the Arabic *siphra* or *sifr*, from which in turn came the English *cypher*.

The other pillar of modern mathematics, the decimal system, was praised by Halstead thus: "This gives to airy nothing not merely a local habitation and a name, a picture, a symbol, but helpful power, which is the characteristic of the Hindu race whence it sprang." French Mathematician Laplace paid a still more magnanimous tribute: "It is India that gave us the ingenious method of expressing all numbers by ten symbols, each receiving a value of position as well as an absolute value, a profound and important idea which appears so simple to us now that we ignore its true merit. But its very simplicity, the great ease which it has lent to all computations, puts our arithmetic in the first rank of useful inventions; and we shall appreciate the grandeur of this achievement the more when we remember that it escaped the genius of Archimedes and Apollonius, two of the greatest men produced by antiquity."

Acknowledging the antiquity of Hindu Mathematics Seidenberg pointed out that the *Shulva Sutra*-s contains not only the original geometry but also the original arithmetic. He wrote: "Arithmetic equations from the Shulva-Sutra-s were used in the observation of the triangle by the Babylonians, and the theories of contraries and of inexactitude in arithmetic methods, discovered by the Hindus, inspired Pythagorean mathematics." Finally an exception worth a footnote: Arithmetical figures formerly used in Ireland were Indian, says the Encyclopaedia of Ireland.

➤ Algebra

"Algebra was developed in apparent independence by both the Hindus and the Greeks," says Will Durant, but adds. "Our adoption of its Arabic name *Al-jabr* ("adjustment") indicates that it came to West Europe from the Arabs – that is, from India – rather than Greece." He further says, "The first algebraist known to us, the Greek Diophantus (360 AD) antedates Aryabhatta by a century," but again says, "Cajori believes that he (Diophantus) took his lead from India." In other words, the apparent Greek origin of Algebra

may actually have itself come from the Hindu origin, making India the birthplace of Algebra. *Edinburg Review* (Nov. 1817) categorically stated that “this excellent mathematical science was purely Hindu in origin.” Ancient Indian mathematicians such as Boudhâyana, Âpastamba, Kâtyâyana and later Brahmagupta and Bhaskarâchârya had worked on Algebra. Bhâskarâcharya called it the science of unexpressed numbers, as against arithmetic, the science of express numbers.

The Arab scholar Musa-al-Khwarizmi came to India in the 9th century to learn Algebra and wrote a book on it titled *Alijeb Oyal Muqabila*. Khwarizmi, Ibn-Washiya, Ibn Mashar and Al-Battani incorporated the knowledge of Algebra, Geometry and other branches of Hindu mathematics into Arab science. Among them Al-Khwarizmi was the chief exponent of the Indo-Arab interaction in the field of mathematics. He developed the Algorithm, which is a process of calculation based on decimal notation of numbers. This method was deduced by Al-Khwarizmi from the Hindu method of geometric computation which he had studied. His treatise titled “On Calculation With Hindu Numerals”, which he wrote around 825 AD, was translated into Latin under the title *De Numero Indico*, meaning “of Indian Numbers”, in the 12th century by an Englishman called Adelard. The translation has survived, while the original Arabic has been lost. Incidentally, according to the *Concise Oxford Dictionary* the term *Algorithm* in English is a corrupt form of the name “Al-Khwarizmi,” which means a person from Khwarizm, the town where Al-Khwarizmi lived. Antedating all this, however, it needs to be noted that the binomial theorem for positive integral exponents was discovered in Europe only in the 10th century, but the concept is found in the *Chhanda Sutra* of Pingala.

Thus a galaxy of ancient Hindu mathematicians contributed to the origin and advance of mathematics in the West. Many outstanding mathematical concepts that are taken for granted in modern times are the products of their brilliant intellect. For instance: Brahmagupta

had proved quadratic equations, indeterminate equations, and various other algebraic functions, and his methods are in use today. Bhaskarâchârya knew the cyclic method of solving the cyclic indeterminate quadratic, and he also knew that an integer divided by zero gives infinity. The origin of today's advanced mathematical science of calculus can also be found in Bhaskarâchârya.

In 1816 AD an Englishman named James Taylor translated Bhaskaracharya's *Lilavati* into English. A second English translation by British astronomer Thomas Colebruke appeared the following year. Thus the works of this outstanding ancient Hindu mathematician-astronomer were made available to the English-speaking world nearly 700 years after he wrote them, although his ideas had already reached the West through the Arabs many centuries earlier.

Aryabhatta made important contributions in pure mathematics. He derived the value of π as 3.1416. He also developed, as stated earlier, in an elementary form the series which later came to be called the table of sines. Before the invention of the Zero he had devised an imaginative method of expressing large numbers like 100,000,000 by writing them in poetic form. His concise treatise *Aryabhattiyam* also deals with geometry and shows knowledge of such arithmetical functions as mensuration, square root, cube root, progression and summation of series. Later he wrote his second treatise called *Aryabhatta Siddhânta*. This is a guide for day-to-day astronomical calculations for determining the auspicious time for various religious rituals. This manual is still in use for such purposes. His four mathematical works were translated into Latin in the 7th century. Many of Aryabhatta's theorems were transmitted to the West by Arabs who came into contact with Hindu sciences around the 11th to 13th centuries. (*India's Contribution to World Culture*.)

A little later, probably in the 14th century, a little-known school of scholars in south India had discovered one of the basic principles of modern mathematics hundreds of years before Isaac Newton, to

whom the finding is currently attributed, according to new research findings reported from London in 2008. It was the identification by the “Kerala School” of the “infinite series”, one of the basic components of Calculus, in *circa* 1350. The discovery is attributed to Newton and Gottfried Leibnitz in the 17th century. A team of mathematicians from the British universities of Manchester and Exeter also discovered what amounted to the *Pi* series and used it to calculate *Pi* correct to 9, 10 and later 17 decimal places. There is evidence showing that the Indian discoveries were borrowed by Jesuit missionaries who visited India in the 15th century. Possibly that knowledge may have been passed on to Newton.

Grouping such instances together Kulkarni says “it is significant to note that some findings of modern mathematics have been anticipated, partly or fully, in Indian texts.” He has given a list of about a dozen such cases, which is interesting enough to bear reproduction:

- Reduction to the ecliptic, by Tycho Brahe (1546-1601). Enunciated by Achyuta Pisharati (1550-1621) in his *Sphuta-Nirnaya* and the formulas referred to in *Râshi-Gola-Sphuta-Niti*.
- Irregularity of π , by Lambert (1671). Clearly stated by Nilkantha Somayâji (1444-1545) in his commentary on *Aryabhatiya*.
- Power series for π , by Gottfried Leibnitz (1646-1716). Implied by Mâdhava of Sangamgrâma (1360-1425), quoted by Shankar Variyar (1500-60) in his commentary on *Lilavati* of *Bhâskaracharya II*.
- Series for inverse tangent, by Leibnitz and James Gregory (1638-75). Enunciated by Mâdhava and quoted by Shankar Variyar in commentary on *Lilavati*.
- Power series for sine and cosine, by Isaac Newton (1642-1727). Implied by Mâdhava.

- Newton-Gauss interpolation formula (up to second order). Enunciated by Govind Swami (circa 800-850) in his commentary on *Mahâbhâskariya* of Bhâskarâcharya I (422).
- Newton-Sterling interpolation formula (of the second order), by Newton. Enunciated by Brahmagupta in *Dhyâna-graha* (625 AD) and in a revised form in *Sidhânta-Shiromani* of Bhâskara II (born 1114).
- Taylor series approximation for sine and cosine functions (up to the second order of small quantities), by Brook-Taylor (1685-1730). Enunciated by Mâdhava and quoted by Somayâji in commentary on *Âryabhatiya* (*Ganita* 12) and stated in different words by Parameshwara of Vatasseri in his commentary (1408 AD) on *Laghubhâskariya* of Bhâskara I.
- Gregory's expansion of third order Taylor series approximation of sine (1668 AD). Equivalent formula for the first four terms, with a minor change, enunciated by Parameshwara in his *Siddhânta-dipikâ* commentary on Bhâshya of Govind Swami on *Mahâbhâskariya* of Bhâskara I.
- Lahniler's formula for the circumradius of a cyclic quadrilateral (1782 AD). Enunciated by Parameshwara in commentary on *Lilavati* of Bhâskara II.
- Mean value theorem of differential calculus. Parallel theorem propounded by Parameshwara in *Siddhânta-dipikâ*.

Summing up the backward situation in Europe vis-a-vis advanced Hindu mathematics, B. V. Subbarayappa writes: "The Indian numerals (misnamed Arabic numerals) reached Arabia probably by the seventh or eighth century AD. In the 9th century the Arabic mathematician al-Khwarizmi was the leading exponent of this system. In the 12th century AD Adelard of Bath in England translated into Latin al-Khwarizmi's mathematical works, and was thus probably the earliest transmitter of the Indian numerals to

Western Europe. During the same period John of Seville and Abraham ibn Ezra were the other disseminators of the decimal place value notation taken from Arabic sources. Nevertheless, in Europe then the use of the abacus was widespread and the abacists strongly opposed the use of decimal place-value notation. In the very first decade of the 13th century AD in Italy, Fibonacci expanded the Indian numerical system, and his arithmetical work *Liber abaci* was extremely popular. There were others like Villedieu and Sacrobosco in Europe who were protagonists of this system in Europe. Thus by the 13th century AD the Indian decimal place-value notation had established itself in Europe and has since become universal.” (*India’s Contribution to World Thought and Culture.*)

To conclude with a remarkably perceptive quote from Australian Indologist Basham: “The world owes most to India in the realm of mathematics, which was developed in the Gupta period to a stage more advanced than that reached by any other nation of antiquity. The success of Indian mathematics was mainly due to the fact that Indians had a clear conception of the absolute number as distinct from the numerical quantity of objects or spatial extension. Thus the Indians could take their mathematical concepts to an abstract plane, and with the aid of a simple numerical notation devise a rudimentary algebra as against the Greeks or the ancient Egyptians, who, due to their concern with the immediate measurement of physical objects, remained confined to mensuration and geometry.”

➤ **Medicine**

Europe owes its system of medicine to the Arabs, and through them to India. In forceful support of this assertion of Lord Ampthill, W. W. Hunter flatly says in his *Brief History of the Indian People* that Arab medicine was founded on translations from Sanskrit works about 800 AD. Even the name ‘Allopathy’ generally applied to European/Western medicine shows its Indian/Hindu origin. As said earlier, Allopathy is an allied development as a branch of Indian

medicine which prevailed in Europe and other parts of the world till about the end of the 18th century. *Allo* means “a learned borrowing” from the Greek *allos*, meaning “other”. So *allo-pathy* is a medical system that is “borrowed from the other” system, namely Ayurveda. It is thus a modern development of the ancient science of Ayurveda. Ayurveda, “the Science of Life”, has its origin in Atharva Veda. In fact it is a branch of Atharva Veda. This science rests upon *Ashtānga*, “eight divisions”, as enumerated in *Sushruta Samhita*. They are: Internal Medicine, Surgery, Therapeutics, Paediatrics, Toxicology, Psychiatry/Psycho-therapy, Rejuvenation, and Virility-Stimulation.

➤ Therapeutics

The two leading lights of the ancient Hindu medical science were Charaka and Sushruta. Charaka led the school of Ayurvedic therapeutic medicine, while Sushruta was the father of surgery. Ayurvedic texts contain a vast treasurehouse of medical knowledge and even related general information, such as the influence of environmental factors. For instance, a chapter in *Charaka Samhita* titled *Janapadodhwamsaniyam* is on epidemics and pollution of air, water and ground. The works of both Charaka and Sushruta were extensively translated and have attained recognition even today in European countries like Germany and Russia. “Hippocrates (460-370 BC) is said to be the father of Western medicine, but he has entirely borrowed it from India.” (S. D. Kulkarni, *History of Science, Art and Technology*.)

While not so emphatic, Subbarayappa does point out that Indian medical knowledge and surgical practices influenced those in Greece in no small way. There are several direct references in the Hippocratic Collection to the borrowing of some Indian drugs and Indian formulas in Greece. The treatise of Hippocrates, *On Breath*, deals in much the same way with its pneumatic system as the Hindu concept of *Vāyu* or *Prāna*. Plato in his *Timaeos* discusses pathology in almost the same manner as the doctrine of *tridosha*. Filliozat says:

“India may very well have influenced the Hippocratic Collection, and Timaeos particularly, since Plato does not mention his sources, and since, moreover, his doctrine is closer to the Hindu than that of any contemporary Greek school. The influence of Indian ideas on aspects of Greek medicine during Plato’s time is also supported by the mention of Indian medicines like pepper in the *Diseases of Women* part of the Hippocratic Collection. Knowledge of ancient Hindu medicine most probably reached Greece/Europe through the Parthian Empire, which had then included parts of India and Greece alike, along the trade routes described by Strabo and Pliny. (J. Filliozat, *A General History of Science*.) Arrian also had acknowledged Greek indebtedness to Hindu medical knowledge. To this RC Dutt adds an interesting tit bit in *Ancient India*: “The Grecian physicians found no remedy against the bite of snakes, but the Indians cured those who happened to incur that misfortune.”

It was the same with Rome. The Roman Celsus (c. 1st century AD) gave a graphic account in his medical works of lithotomy (surgical removal of kidney stone), which was practised in India much earlier. Galen, a resident of Rome, openly acknowledged his borrowing from Indian sources material for eye ointment and the Indian plaster. It is well-known that Indian herbs were in demand in the Roman world.

Another leading exponent of Hindu medicine was Vâgbhata (7th century), who systematized the knowledge of Ayurveda in his treatise *Ashtânga-Hridaya-Samhita*. He classified physical objects according to their origin and laid down the process of preparing various medicines. He knew various diseases and ailments from fever and acidity to tuberculosis and leprosy, and how to treat them. Additions to this fund of Ayurvedic knowledge were later made by many eminent physicians like Dhanvantari, Chakrapânidatta, Vrinda etc. There was also a meticulous code of professional ethics and social conduct for the medical profession, much like the “Oath of Hippocrates”.

Experts say that many so-called modern medical concepts were already known in Ayurveda. Charaka's description of invisible *krimi* (corpuscles) in blood, that they are unicellular structures, circular or disc-like, without feet, and of coppery colour, would rival even modern accounts. Sushruta also mentions pathogenic micro-organisms to be the cause of certain forms of fever, pulmonary consumption, leprosy, smallpox and tuberculosis.

Kulkarni asserts that Charak had even clearly anticipated Homeopathy. In support of this assertion he gives the following free rendering of chapter 30 of Charaka Samhita: Sometimes the treatment of diseases in the joints or internal disorder that is opposed to the usual method proves effective. The internal heat caused by the disturbance in *pitta-dosha*, inflammation through increase in bile, is suppressed and cured by applying heat to or massaging the part through the bandage with hot substances. Thus heat kills heat. Similarly cough is cured by applying cold substances to outside parts. Thus cold kills cold. If sandal wood paste is applied to the body it causes internal heat to be concentrated on internal inflamed parts, and thus this process restores that part to its original state. Here the heat works on the heated part and cures it. This is exactly the basic principle on which Homeopathy works. It is the treatment of a disease with minute doses of a drug inducing symptoms of the same disease. "Homeopathy" is derived from the Sanskrit *Samapathya* (*Sama*, 'same' *pathya*, 'beneficial medicine').

Encyclopaedia Britannica says that in India "surgical practice, as well as medical, reached a high degree of perfection at a very early period." This period is at least 3000 years before Alexander's invasion (327 B.C.). Dr. Wise in his *History of Medicine among the Asiatics* wrote that the "elaborate and lofty ethical code (quoted in the *Encyclopaedia*) appeared to be of pure Brahmanic origin and a very copious materia medica – which includes arsenic, mercury, zinc and many other substances of permanent value – does not contain a single article of foreign origin." There is also evidence in Arrian,

Strabo and other eminent Greek writers that “the East enjoyed a proverbial reputation for medical and surgical wisdom at the time of Alexander’s invasion.”

➤ Surgery

Sushruta, the father of Indian surgery, lived in Kashi in the 4th century BC. His work *Sushruta Samhita* is the world’s oldest treatise on *Shastra Karma* (“surgery”), in which he described surgical procedures under eight heads, namely *Chhedya* (excision), *Eshya* (exploration), *Ahârya* (extraction), *Lekhya* (scarification), *Vedhya* (puncturing), *Bhedya* (piercing), *Vishrava* (evacuation), and *Sivya* (suturing). Sushruta’s special expertise was in rhinoplasty (plastic surgery) and ophthalmology (extraction of cataract). A typical operation for cataract removal by Sushruta has been described in detail in his treatise. The description is so meticulous that it sounds like a surgery carried out today rather than 2500 years ago.

However, the greatest contribution of Sushruta was the operation of rhinoplasty, restoration of a mutilated nose with plastic surgery. The detailed description of the rhinoplasty operation in the *Sushruta Samhita* is also amazingly meticulous and comprehensive. There is evidence to show that his success in this kind of surgery was very high, which attracted people from all over the country and perhaps even from abroad. Cutting off the nose and ears was one of the common modes of punishment in early Indian kingdoms. Sushruta, moved by his humane approach to life and equipped with superb surgical skills, did the operation of rhinoplasty with remarkable success. Details of the steps in this operation performed in the 4th century BC and recorded in the *Sushruta Samhita* are amazingly similar to the steps followed today in advanced plastic surgery.

An amazing modern proof of this ancient Hindu skill became available in the 18th century. During the war between the British and Tipu Sultan in 1792 AD a Maratha cart-driver with the British army was captured by Tipu’s soldiers and his nose cut off. A year later a

kumhâr (potter) *Vaidya* of Pune reconstructed the man's nose in the presence of two English doctors, Thomas Cruso and James Trindlay, of the Bombay Presidency. An illustrated account of this operation – described as “not uncommon in India and has been practised for time immemorial” – was published in the *Madras Gazette* which the *Gentlemen's Magazine* of London reproduced in October 1794. The surgical procedure of the potter closely corresponded to that laid down in the *Sushruta Samhita*. The British doctors who watched it copied the process and introduced it in allopathy. (K. K. Somani, *Indian Economic and Social Traditions*.)

Thus, it can be said that European doctors borrowed the knowledge of rhinoplasty from an Indian potter. *Sushruta Samhita* mentions 300 different operations and more than 120 surgical instruments. Dr. Hirschberg, a German surgeon, says, “The whole plastic surgery in Europe took a new flight when these running devices of Indian workmen became known to us.” The transplantation of sensitive skin flaps is an entirely Indian method. In fact, the Arabs, the Egyptians, the Greeks – they all learnt surgery from the Hindus. *Sushruta's* technique of cataract removal, mentioned earlier, was unknown to ancient Greeks and Egyptians, limbs were amputated, abdominal operations were performed, fractures were set, dislocations, hernia and ruptures reduced, haemorrhoids and fistula were removed – and it is a fact that methods recommended in *Sushruta Samhita* sometimes prove more successful than those adopted by surgeons of modern times.

➤ **Anatomy**

Sushruta was not only among the world's earliest pioneers in surgery but also one of the earliest physicians to study anatomy. In his *Samhita* he has given detailed instructions on how to study anatomy with the use of a dead body. A sample quote: “For these purposes a perfectly preserved body must be used. It should be the body of a person who is not very old, and did not die of poison or severe disease. After the intestines have been cleaned, the body must be

wrapped in the inner bark of a tree, grass, or hemp, and placed in a cage (for protection from animals). The cage should be placed in a carefully concealed spot in a river with a fairly gentle current, and the body left to soften. After seven days the body is to be removed from the water and with a brush of grassroots, hair and bamboo it should be brushed off, a layer at a time. When this is done the eye can observe every large or small, outer or inner part of the body, beginning with skin, as each part is laid bare by the brushing.”

Here it is interesting and would be relevant to quote B. G. Rele in *The Vedic Gods*: “Our present knowledge of the nervous system fits in so accurately with the internal description of the human body given in the Vedas 5000 years ago. Then the question arises whether the Vedas are really religious books or books on anatomy of the nervous system or medicine.”

The Vedas too contain clear references to surgical operations: When sage Nārshada became deaf the Ashwini Kumara-s restored his hearing. Sage Vandana had his eyesight restored (RV. 1. 116.11). When the sages Vimana and Vishvaha became deranged brain surgery was performed on them (RV 8.86.2). Incidentally, the modern medical term *cerebrum*, meaning “brain”, is derived from the Sanskrit word *shiro-brahma*, meaning the main part of the head. An amazing example of the precision of ancient Hindu anatomy is that according to it a *vâlâgra*, tip of a hair, is 1/5000 th of an inch thick.

➤ Vaccination

It is claimed that Edward Jenner discovered vaccination in 1789. However, Indians had a system of inoculation against smallpox before the British arrived. That it was practised in Bengal has been mentioned in *An Account of the Disease of Bengal*, Calcutta on February 10, 1731. There was also another work of the same year titled *Operation of Inoculation of the Small Pox as performed in Bengal* which said it was in practice for at least 200 years.

In 1767 a British doctor by name J. C. Howell wrote a book on vaccination in India describing how safe the system was. At that time European medicine did not have any treatment on this disease. “Even the authentication of Edward Jenner’s vaccination came from Ayurvedic vaccination’s proven track record,” said Prof. B. M. Hegde, Vice-Chancellor of the Manipal Academy of Higher Education and a medical doctor. It was in 1792 that Jenner wrote his book on vaccination titled *An Inquiry into the causes and effects of the variolate vaccine, a disease discovered in some of the western counties of England*, and sent it to the Royal Society in 1797. The Oxford University awarded him an honorary MD degree for it – without a word in acknowledgement of Jenner’s Indian source of knowledge!

➤ **Siddha Medicine**

Siddha is an ancient Indian system of medicine that was widely practised in south India. How Jesuit missionaries and other Europeans in India made systematic, large-scale efforts from the 15th century onwards to physically send its knowledge to Europe in the form of shipments of books, manuscripts and materials has been extensively described by researcher KV Ramakrishna Rao in his contribution (already mentioned) to *The Hindu Renaissance* (Makar Sankranti, Yugabda 5108) titled *The transmission of scientific knowledge from Tamizhagam to Europe (15th to 20th century)*. He says the writings of Jesuit missionaries reveal details of such transmission taking place during the period 1600 to 1850, and even later, particularly from Tranquebar, Pondicherry and Madurai. Portuguese physician Garcia d’Orta (1501-1568), Finnish botanist L’Ecluse, Dutch scholar Henrick Rheede (1637-1691), Johann Grundler (1677-1720), Linchoten (16th century) and others had studied Siddha medicine and sent voluminous palm-leaf books to Europe.

Tranquebar had a fortified scientific research centre for Europeans, where “Jesuit-Botanists” and “Botanist Doctors” had

formed a regular society called 'The United Brothers.' "It was formed mainly to study Indian Siddha medicine, collect samples and formulations". These were sent "to botanists of established reputation in Europe." The Tranquebar society was formed on the lines of the British Asiatic Society in Calcutta. Its members were naturalists, orientalist, linguists and historians from Denmark and Danish colonies, including missionaries. The French in Pondicherry also did not lag behind in doing the same as the Danes. They also sent large collections of plants to Paris for study.

When Syphilis (then called great-pox) was introduced into India by Vasco da Gama and the Portuguese, desperate attempts were made to get Siddha medicine for its treatment. There are Siddhar songs about how the afflicted Europeans "tried to grab their formulations by just giving them tobacco !" After thus "stealing the technology", the East India company ordered the closing down of all Siddha and Ayurvedic works. Passing one medical act after another, it banned Indian doctors, midwives and all other medical workers from following their vocation. And finally it gave a death blow to Indian medicine, and particularly to the Siddha system, by introducing the Poisonous Act.

Among the 'Botanist Doctors' who arrived in India in droves was a Dutch scholar by name Henrick Adrian Van Reede (1637-1691). When Reede landed in Kerala he was surprised to see a great botanical garden there. In India such gardens have been a part of temples (where they were known as *Nandana-vanam*) as well as hospitals.

➤ Genetics

The American Genetic Association's *Journal of Heredity* published an article in 1984 on *Reproduction and Heredity Beliefs of the Hindus Based on Their Sacred Books*, which discussed writings related to procreation contained in *Manu Smriti*, *Brihat Samhita* of Varâha-mihira, and the *Brihat Âranyaka Upanishad*.

It said these scriptures laid down special types of food to have special types of children. The *Brihat-Āranyaka Upanishad* recommended various dietary combinations containing rice, milk, curd, ghee and other nutrients for having a son or daughter with special qualities ranging from high intellect to a fair complexion. According to the article the wisdom of these injunctions was confirmed by studies conducted by French and other physicians.

All this debt of Hindu medical knowledge the Greeks have acknowledged. "It is to the Hindus we owe the first system of medicine," said Arrian. He also said the Greeks "when indisposed, applied to their sophists (Brahmanas), who by wonderful, and even more than human, means, cure whatever would admit of cure."

Strangely enough, even ancient Britain apparently had Vaidyas (physicians) with names originating in Hindu divinities. Writes Dorothea Chaplin: "The Macbeths, Beatons or Betunes were physicians, their names originating from 'Life's son', (*Beatha* or *Beathune*. See *Scotsman, Origin of Surnames*, June 16, 1934). An early Gaelic physician named MacBeathadh (*Bethune*, literally "son of life") with "dh" silent, apparently originates from Baidya. Shiva under the title of Baidyanath is Lord of physicians."

Coming from ancient times to modern, when a Swedish doctor saw the healing effect of the herb *Sarpagandhâ*, he introduced Serpentine in Europe.

➤ Stem Cell Research

And finally from modern to ultra-modern – the ultra-modern branch of medical science called stem cell research. Stem cell research is supposed to be the latest field of medical research. Actually it is one of the lost Hindu sciences and is as old as the Mahabharat, asserts Dr. B. G. Matapurkar, pioneer of stem cell research in India. This was reported by the *Week* magazine in its issue of September 16, 2001. Matapurkar says the Kauravas were born of embryonic stem cells, and the pots they were put into were incubators. In the

Adi Parva of the Mahabharat it is said that the Kauravas were created from a dead, calcified embryo which Gândhârî gave birth to after a two-year pregnancy. This *pind* (ball of flesh) was given to sage Dwaipâyana for treatment, and, says the Mahabharat, he washed it with cold water. In modern medical terminology this cooling process is called hypothermia. It is a condition in which the virus survives in large quantities for a long period. Dwaipâyana's use of cold water indicates that he was trying to create a congenial condition for the embryonic stem cells in the foetus to develop.

According to the Mahabharat the sage divided the *mâns-peshi* (ball of flesh) into one hundred parts and treated them with herbs and ghee. The parts, of the size of the tip of the thumb, were covered with cloth and kept in a chamber to cool for two years, after which period the Kauravas were produced from them. Dr. Matapurkar asserts that there can be no other explanation for this phenomenon than that the Kauravas were born from stem cells. Dr. Matapurkar has himself successfully extended the stem cell principle to the cloning of human body parts. He holds a U. S. patent which says "this discovery can really create parts of a human body and can make them new."

➤ Physics

The Vedas say *Shabda*, sound, is God's first creation. Sound waves and light waves are just two aspects of the same primal energy. Patanjali says in *Yogasutra*: "Different objects are due to different arrangements of atoms." Modern scientists also use the same language to explain the multiplicity of objects in the world.

In an experiment conducted in a laboratory in Czechoslovakia in 1935 the moon's rays were made audible. The moonlight was converted into sound waves, and the result was a long-drawn, harmonious, rising and fading sound in the pitch of 'A'. The waves were recorded and broadcast. (SN Dasgupta, *A History of Indian Philosophy*, 1922.)

Newton's Laws of Motion, which he enunciated in 1675, were known to the Hindus at least 1500 years earlier, as can be seen in the Sanskrit work *Prashastapâda Bhâshya* that Prashastapâda wrote in the first century. The basic laws that Newton lays down in his work *Principia* are: 1. Change of motion is caused by impressed force. 2. Change of motion is proportional to the motive force impressed, and occurs in the direction of the line in which the force is impressed. 3. To every action there is an equal and opposite reaction. In his book *The physics* Dr. N. G. Dongre gives a quote from Prashastapâda which states these basics quite clearly. To this Hebalkar adds that in Europe many principles of physics were propounded in the 14th century that are already contained in the Sanskrit treatises *Padârtha-Dharma-Sangraha*, another work of Prashastapâda, and *Vyomavati* of Vyomashivâchârya.

➤ Atomic Physics

The last miniscule particle of matter which could not be subdivided further was termed *Paramânu* in Sanskrit, meaning "infinitesimal particle", "an atom". The Hindu concept of the atom was developed independently and prior to the development in the Greco-Roman world. The first Hindu philosopher who formulated ideas about the atom in a systematic manner was Kanâda, who lived in the 6th century BC. Another Hindu philosopher, Pakadha Kâtyâyana, who also lived in the 6th century BC, had also propounded ideas about the atomic constitution of the material world. These philosophers considered the atom to be indestructible and hence eternal. Hindu theories about the atom were abstract and philosophical, as they were based on logic and not on experimentation. Consequently these theories lacked an empirical base. Still, to quote Australian Indologist A. L. Basham, "they were brilliant, imaginative explanations of the physical structure of the world, and in a large measure agreed with the discoveries of modern physics."

The system of philosophy which initiated the development of ideas about the atom was the *Vaisheshika* school. Its founder, a brilliant philosopher by name Kâshyapa (later called Kanâda), propounded the concept of atom for the first time. According to legend Kâshyapa (6th century BC), the son of a philosopher named Ulka, displayed since his childhood a keen sense of observation of minute things. The story goes that once, when he was a young boy, he had accompanied his father on a pilgrimage to Prayag, where he noticed that thousands of pilgrims who were flocking to the holy city littered its streets with flowers and grains of rice that they offered at the temples by the Ganga. While everybody else was busy offering prayers, or bathing in the Ganga, young Kâshyapa set about collecting the grains ('*kana* ') of rice that littered the streets. Looking at this strange behaviour of the boy, who seemingly belonged to a well-to-do family, many curious passersby stopped to watch him. Soon a crowd gathered round young Kâshyapa who, oblivious of the attention he was attracting, continued collecting the grains. A learned saint by name Somasharma was passing by and wondered why the crowd had collected when everybody should have been at the bathing *ghat* for the morning's ritual bath. On drawing near he saw the boy and heard the derogatory remarks people were making about him. Being himself curious about the reason for Kâshyapa's strange behaviour Somasharma asked him why he was collecting discarded grains that even a beggar would not care to collect. Somewhat hurt at this question, Kâshyapa replied that howsoever miniscule an object might be, it nevertheless was a part of the universe. Individual grains in themselves may seem worthless, but a collection of some hundred grains would make up a person's meal. The collection of many meals would feed an entire family, and ultimately the entire mankind was made up of many families. Thus even an isolated grain of rice was as important as the most valuable riches in the world. This reply of the young Kâshyapa deeply impressed Somasharma, who said one day Kâshyapa would grow into a celebrated

philosopher, and in recognition of his unusual sense of perceiving miniscule objects, he would become known as Kanâda, from 'kaòà', that is, a 'grain'. This was how Kashyapa became Kanâda, a name that became immortal in the history of science due to the path-breaking conception of atom and relativity which Kanâda put forth.

Kanâda propounded the Vaisheshika Sûtra ("Peculiarity Aphorisms"). These Sutras were a blend of science and philosophy. Their theory was the atomic theory of matter. They show that Kanâda's atomic theory was far more advanced than that formulated later by Greek philosophers Democritus and Leucippas.

It was Kanâda who first propounded the fact that the *Paramânu* (atom) was an indestructible particle of matter. He said the material universe is made up of *Paramânu*-s. When matter is divided and subdivided we reach a stage beyond which no subdivision is possible; the indivisible indestructible element of matter is *Paramânu*. This entity cannot be sensed through any human organ. Kanâda said there are different types of *Paramânu* for the *Panch Maha Bhûta*-s, namely, earth, water, fire, air and ether. Each Paramanu has a peculiar property which depends on the substance to which it belongs. It was because of this conception of peculiarity or individuality of *Paramânu* (atoms) that this theory propounded by Kanâda came to be known as *Vaisheshika Sutra* (Peculiarity Aphorisms). In this context Kanâda seems to have arrived at conclusions which were surpassed only many centuries after him.

Kanâda observed that there is an inherent urge that made one Paramanu combine with another. When two Paramanu belonging to one class of substance combined, a 'Dvinuka' (binary molecule) was formed. This Dvinuka had properties similar to the two parent Paramanu. In the material world, according to him, Paramanu belonging to different classes of substances combine in different combinations, giving us a variety of Dvinuka, in other words, different types of substances. Apart from such combinations of different

Paramanu-s Kanâda also put forth the idea of chemical changes occurring because of various factors. He argued that variations in temperature could bring about such changes. He sited the examples of blackening of a new earthen pot and the ripening of fruit to illustrate the chemical change in substances brought about by heat.

Kanâda also said an object appears to be less heavy under water than it does in air, because the density of atoms in water is more than in air. The additional density of atoms in water, he said, takes on part of the weight of an object; hence we feel only a part of its total weight, while in air the lesser density of atoms results in a lesser part of an object's weight being picked by air; hence we feel the object to be heavier in air than what it was under water. In saying this, in a very elementary but important way, Kanâda foreshadowed Archimedes's theory that a body immersed in a fluid is subject to an upward force equal in magnitude to the weight of the fluid it displaces. Kanâda's idea also had shades of relativity in it which was propounded by Einstein in our times.

Thus according to Kanâda all substances, all matter that existed in the universe, was formed of *Paramanus* (atoms). The variations in the matter reflected the peculiarity of the Paramanu which constituted that particular matter, the variety of combinations between different types of Paramanu, and the effect on them of variation in temperature. Yogi Paramahansa Yoganand explained in 1945 that the term Vaisheshika is derived from *Vishesas*, which can be translated as "atomic individuality".

These Indian ideas about atom and atomic physics could have been transmitted to the West during contacts created between India and the West by the invasion of Alexander, around 330 BC. Greek philosophers like Aristotle, his mentor, would surely have studied the sciences of the lands that the Greek armies overran. This way, possibly, Indian ideas could have travelled Westward, where they were developed further. (*India's Contribution to World Culture.*)

These ideas were astonishingly comprehensive even at their elementary stage, as has now been acknowledged in the West. For Kanâda, even 2600 years ago, “was expounding, in his own words, what clearly seems to be such an unexpectedly modern scientific theory as the atomic nature of matter, the spatial expanses between atoms in their own systems, the relativity of time and space, the theory of cosmic rays, the kinetic nature of all energy, the law of gravitation as inherent in “earth” atoms, heat being the cause of molecular change.” (Charles Berlitz, *Mysteries from Forgotten Worlds*.) A significant footnote that would bring out the fundamental oneness of the universe expounded by the atomic theory of Hindu philosophy is to point out here that Apte’s Sanskrit Dictionary explains the word *anu* as not only an atom of matter but also as an atom of time.

New Physics : By far the most startling development in physics, however, is that what has come to be known as New Physics is distinctly veering towards Hindu philosophy for understanding the nature and functioning of the Universe. With the rejection of Newton’s conception of the Universe as a Great Machine operating as per definite and understandable laws of motion, gravity and so on, the latest refinements like Particle Physics and Quantum Mechanics now acknowledge that reality, “real” reality, is not confined within the limitations of rational understanding. Rather, with Bell’s Theorem and Bohm’s Theory the scientific concept of reality has taken what one may call a quantum leap.

In 1964 J. S. Bell, a physicist at the European Organization for Nuclear Research (CERN) in Switzerland, published a mathematical paper known as Bell’s Theorem, according to which at a deep and fundamental level the “separate parts” of the universe are all connected in an intimate way. To put this in Hindu philosophical terminology, there is an all-permeating *Paramâtma* filling the whole *Brahmânda*. While quantum physicists had already realized in the 1970’s that our commonsense ideas were inadequate for describing

the behaviour of sub-atomic particles (*Paramânu*) Bell's Theorem showed that they were inadequate even to describe macroscopic events. In other words, sub-atomic / microscopic reality and universal / macroscopic reality are equally incomprehensible, or equal in being incomprehensible – except with the Hindu philosophical principle of *Yat pindé tat Brahmândé*.

David Bohm, Professor of Physics at London University, held that Quantum Physics is based upon a new order. He said, "We must turn Physics around. Instead of starting with parts and showing how they work together, we start with the whole." In other words, Quantum Physics depends upon the acceptance of the universe as a unity – a unity that is succinctly revealed by Lord Krishna in the *Bhagavad Gita* when he says everything emanates from Him and everything merges into Him. Bohm's Theory is compatible with Bell's Theorem. While Bell states that the apparently "separate parts" of the universe could be intimately connected at a fundamental level, Bohm asserts that this fundamental level is an "unbroken wholeness," which is, in his words, "that- which-is" – *tat-tvam*.

This is the amazing confluence of modern, western science with *sanâtana* Hindu philosophy – *sanâtana*, eternal, because it was as perceptive in the hoary past of ancient seers as it is in the historical times of Adi Shankarâchârya. Pointing this out, N. S. Prasad writes in *Science and Shankara in Search of Highest Truth* (Bharatiya Vidya Bhavan, Mumbai, 1991): "One thing which is incredible is how close Shankara's works are to the conclusion reached by modern scientists. What Shankara said or preached 1200 years ago is true today. The greatest contribution is his theory of knowledge pertaining to non-duality. His theory of *Mâyâ* is identical to the present-day Uncertainty Principle through which scientists are trying to explain the dual nature of matter. Shankara realized the dual nature of objects 12 centuries ago, and he believed that Reality or Truth must be singular, not plural."

This philosophical insight was the “instrument of thought” that Bohm said his physics requires, an instrument that would radically alter consciousness of the observer of reality, reorienting it towards a perception of the “unbroken wholeness” of which everything is a manifestation. Such an instrument already exists in the form of “Eastern Religions”, says Gary Zukav in his engrossing book *The Dancing Wu Li Masters: An Overview of the New Physics*. By “Eastern Religions” Zukav mainly means Hinduism and Buddhism, and says it “would be foolish to ignore” their similarities with Bohm’s physics. If, says Zukav, Bohm’s physics became the main thrust of the physics of the future, “physics curricula of the twenty-first century could include classes in meditation.” In other words, physicists in the twenty-first century A.D. may well go back to what the *Rishis* of Bharat were doing in the twenty-first century B.C. and far beyond.

In forceful – albeit to a Hindu sensitivity rather outlandish – language Gary Zukav writes in *The End of Science*, the end chapter of his fascinating book : “In Hindu mythology Kali, the Divine Mother, is the symbol of the infinite diversity of experience. Kali represents the entire physical plane. She is the drama, tragedy, humour, and sorrow of life. She is the brother, father, sister, mother, lover and friend. She is the fiend, monster, beast and brute. She is the sun and the ocean. She is the grass and the dew. She is our sense of accomplishment and our sense of doing worthwhile. Our thrill of discovery is a pendant on her breast. Our gratification is a spot of colour on her cheek. Our sense of importance is the bell on her toe. This full and seductive, terrible and wonderful earth mother always has something to offer. Hindus know the impossibility of seducing her or conquering her, and the futility of loving her or hating her. So they do the only thing they can do. They simply honour her.”

➤ Alchemy

The twin objectives of alchemy – the transmutation of base metals into gold or silver, and the preparation of the elixir of life to

attain immortality – attracted the attention of all civilizations for over 2000 years in the ancient and medieval periods. In India it seems to have made its appearance in the 6th or 7th century AD. Although in modern times alchemy may appear fantastic, it laid the foundation of iatro-chemistry (chemistry related to diseases). In India alchemy (*Rasa-shâstra*) evolved into iatro-chemical practices probably in the 11th or 12th century, reaching the West in the 15th.

In the 15th century Paracelsus in Rome made a new development by adding salt to the two fundamental alchemical principles of mercury and sulphur. However, Tamil alchemy had recognised the prime importance of salt, and mineral medicines using mercury, sulphur and salt were in use in India in the 11th or 12th century. All in all, it is fairly certain that the use of alchemy for bringing succour to disease-afflicted humanity was recognised in India much earlier than by the iatro-chemists of the West led by Paracelsus. (Subbarayappa.)

➤ **Chronology**

Chronology, the measurement of time, is a Hindu Science, and it has impacted not only Europe but the world at large. Internationally reputed British theoretical physicist Stephen Hawking says in his book *A Brief History of Time* that the Universe and Time started together with the Big Bang, since when the Universe has been continually expanding. The ancient Hindus put this concept in just one Sanskrit word *Brahma*, meaning the universe, in which the root *brh* means to expand, to explode.

The age of this universe in terms of time was calculated by the Hindus in stupendous units called *Yugas*. The primary division was into *Yugas*, called *Kali*, *Dwâpara*, *Treta*, and *Krita* or *Satya*, and their durations were: *Kali Yuga* : 432,000 years, *Dwâpara Yuga* equal to 2 *Kali Yugas*, 864,000 years, *Treta Yuga* equal to 3 *Kali Yugas*, 1296,000 years, and *Satya Yuga* equal to 4 *Kali Yugas*, 1728,000 years. The four ages together made a *Chatur-Yugi* of 4320,000 years. 71 *Chatur-Yugis* make a *Manvantara* of

306720,000 years, 14 *Manvantaras* plus 15 Satyayugas for a period of “evening” / decline make a *Kalpa*, 4320,000,000 years. One *Kalpa* means one day of Brahmâ, with one night of equal duration. 100 years of such days of two *Kalpas* each is the life-time of Brahmâ.

Fantastic as these figures are, their accuracy is astounding. In his *Theogony of the Hindus* Scandinavian scholar Biornstierna quotes reputed European astronomer Bailley thus: “According to the planetary calculations, the present Kali Yuga started 3102 years BC ago, on February 20 at 2 hours, 27 minutes and 30 seconds. The Hindus further say that all the planets were under the same zodiacal time of *Kaliyuga*, as their tables also say. The calculations made by the Brahmins prove absolutely correct according to our astronomical tables.”

As seen earlier, Brahma’s *aho-râtra* (day and night) lasts for 864 crore / 8.64 billion years. About this calculation well-known cosmologist Carl Sagan says in his book *Cosmos*: “The Hindu religion is the only one which is dedicated to the belief that a particular sequence of the creation and destruction of the universe is going on, and this is the only religion which has made calculations from the ordinary day and night to Brahma’s day and night of 8.64 billion years which, by coincidence, is close to the modern astronomical calculations.” Sagan has said this also in his preface to Hawking’s *History of Time*; however, if, as Bailley has acknowledged, the Hindus calculated the period of *Kali-Yuga* so accurately, there need not be any “coincidence” about the similarity between the ancient Hindu measurement of the age of the universe and the calculation by the modern West. Rather, it merits acknowledgement as a brilliant intellectual exercise on the part of ancient Hindu astronomers.

➤ Religious Architecture

Hindu religious architecture influenced Christian Europe in the medieval age, with traces of the impact discernible even long before that. This history has been extensively related by José Pereira in

The Plan of the Hindu Temple and its Impact on the Baroque Church, his contribution to *India's Contribution to World Thought and Culture* (Ch. Ed. Lokesh Chandra, pub. Vivekanand Kendra Prakashan Trust, Chennai, 1970, reprint 2003).

Beginning with the basics Pereira observes: Religious architecture is basically guided by two approaches to the sacred: that of *veiling* and that of *unveiling* or *revealing*. The first stresses the *mystery* of the sacred: the divine is inviolate and must be hidden from the gaze of the profane. The second emphasizes the *glory*: the splendour and majesty of the godhead must be made manifest to all. This introduction is followed by a history, which, minus the scholarly details, is broadly as follows:

The Hindu temple is oriented towards mystery, and it enshrines its principal idols in dark sanctuaries. In its basic pattern this sanctuary is preceded by an antechamber. This plan, which may be called that of the “diminished sanctuary” is also seen in Greek temples, as in the temple of Apollo at Didyma. Usually, three units form the pattern of the Hindu temple: *Garbhagriha* (the shrine), *Mahâmandapa* (the antechamber), and *Chatushki* (the quadrilateral courtyard or porch). All other subsidiary elaborations are mainly guided by the first two. This gives the Hindu temple greater compactness than, say, the medieval church with its arcades and aisles.

Christianity, as a religion of mass worship, modelled the church on that great hall of prayer, the basilica, which was usually a rectangular space flanked by columns. Like the temple, the basilica was mainly trabeate, that is, it used beams, not arches, unlike the Roman temple.

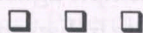
Christianity came to India at a time when the country's model house of worship was the Buddhist *chaitya*. The *chaitya* is so similar in plan both to the basilica and to the early Christian church that Indian churches of that time may well have followed the Buddhist pattern.

After Buddhism declined in India by the 10th century the Hindu temple again became the prevalent model of a shrine. Consequently the Indian church became increasingly Hindu in appearance. When

the Portuguese arrived in India they found that the churches in Kerala looked like Hindu temples. "Many old ones still do", as their nave (central portion of a church structure) is dominated by the sanctuary tower, as a Hindu temple's *Mahâmandapa* by the *shikhara*. Even when the Indian church became baroque (highly ornate) in style and discarded the Hindu appearance in its elevation, it preserved it in its plan. So it can be legitimately asserted that the Indian baroque churches assimilated Hindu architectural features.

In Europe, when the continent was in the grip of the Renaissance and the Catholic church was about to break up into reformist sects, it was through Portuguese eyes that modern Europeans first saw the wonders of India – among them the temple complexes of the South. And it is in the churches of the Portuguese world – in Europe, Asia and America – that the Hindu temple had its greatest impact. Although the diminuted sanctuary plan was not unknown in Europe, its florescence there occurred only after Europe came into contact with India through the Portuguese during the period 1400-1500. Shortly after, they erected the vast, grotto-like edifice on the banks of the Tagus near the spot from where they first set sail for India, which echoes the Hindu temple not only in plan but also in appearance of the columns of its shadowy nave. Later, with the triumph of the Renaissance, the style changed, and at times the nave became octagonal, as antechambers sometimes do in Hindu temples.

In Renaissance Europe it was in northern Italy that the diminuted sanctuary type created some splendid monuments that were nearer in spirit to the Hindu temple than to the churches of Portugal. This Hinduisation of the church architecture took place in Italy in the 17th century. The churches built in Italy by the north Italian architect Guarino Guarini (1624-1684) are as Hindu in spirit as it is possible for baroque buildings to be. The Hindu sanctuary plan not only produced famous landmarks in Venice, Milan, Bologna, Turin but stormed Rome itself.



9. Technology

TECHNOLOGY is applied science. So no wonder when Europe borrowed the knowledge of a number of sciences from the ancient Hindus, they should have done the same with a range of technologies. This borrowing, which began in the hoary past, continued down to modern times.

➤ Iron

This process possibly began with the Hittite (*kshatriya*) Indics reaching the Middle East 4000 years ago and establishing their kingdom three centuries later. Till that time the use of iron was unknown in the Middle East and Europe and articles were made of bronze, copper and silver. It was the Indian immigrants who discovered iron ore mines in Anatolia (Turkey) and began to use iron. Later, as stated earlier, the Hittites moved to Italy. They are the origin of the Indian stamp on the life of the Etruscans of Italy. (Hebalkar.) Thus, iron was an Indian gift to Europe.

Later, during the period of the Roman Empire, Indian iron was being used by the Romans for making arrows as well as

cutlery. Greek historian Herodotus observed in the 5th century that “Indians in the Persian army used arrows tipped with iron.”

Even as late as during the days of the Company Raj, before the formal British takeover of India, India had an advanced iron industry which was the envy of the British. Their admiration of it has been mentioned by Dharmapal in his book *Indian Science and Technology in the 18th Century*. A report sent to the East India Company around the end of that century by one Major James Franklin said iron made in India was of such a superior quality that it surpassed iron made in Sweden, which was considered the best in Europe at the time. He found that even low-quality Indian iron was superior to the best iron made in England.

A marvel of metallurgy that, though not quite relevant here, merits mention is the Iron Pillar of Delhi, known as the “rustless wonder”. For the past 1600 years this pillar has been standing in the Kutub Minar premises in the capital in sun and rain under open skies without rusting. It is about 25 ft. tall and has a slightly tapering circumference of about a foot and a half at the base. It weighs 6100 kg. According to Dr. B. B. Lal, chief chemist of the Indian Archaeological Survey, the pillar is made by welding together 20/30-kg. hot pieces of wrought iron. It is believed to have been constructed in 15 days by 120 workers. Scientists of the Indian Institute of Technology, Kanpur, ascribe the iron pillar’s amazing resistance to corrosion to a thin layer of *Misawite*, a compound of iron, oxygen and hydrogen that protects the cast iron from rust.

➤ Steel

Making iron into steel was also a remarkable technological achievement of ancient Indians. David M. Ushte (1840) observes in his *Papers on Steel* (London): “The antiquity of the Indian (steel-making) process is no less astonishing than its ingenuity. We can hardly doubt that tools with which the Egyptians covered their obelisks and temples of Porphyry and Syenite with hieroglyphs were

made of Indian steel. There is no evidence to show that the nations of antiquity besides the Hindus were acquainted with the art of making steel.” There are also Greek sources stating that Indian steel, like iron, was used by the Romans for making arrows and cutlery.

In his historical novel *The Talisman* Sir Walter Scott mentions that in medieval times the swords of the Ayyubid (Muslim) soldiers were made of “Damascene” steel. The original Damascene steel, the world’s first high-carbon steel, was a product of India, known as *wootz*. *Wootz* is English for *ukku* in Tamil and Kannada, meaning “steel”. What is amazing, “the wootz steel still baffles metallurgists”. (*Week magazine*.)

German scientist Peter Panfer examined samples of Damascus / wootz steel with high-resolution electron microscopy and found them composed of carbon nano-tubes and cementite nanowires. Cementite is a compound of iron and carbon and is found in steel with 1 to 2 percent of carbon. The manufacturing process, not yet understood, somehow overcame the brittleness of cementite but at the same time introduced the characteristic bonding and hardness it produces. Carbon atoms are able to form tube-like structures, and these molecule-level physical shapes are the stuff of nanotechnology – an expertise that Indians possessed 2000 years ago, says *Nature* magazine. On the other hand some European metallurgists of the 18th Century, including well-known inventor Michael Faraday, tried to manufacture Indian steel, but failed. Some of them succeeded, but the product was of poor quality.

According to Dharmapal’s book *Indian Science and Technology in the 18th Century*, in September 1795 a Dr. Benjamin Hayden sent a report to the East India Company describing a small village in Madras presidency which had as many as 40 furnaces for steel-making. He even gave details of the furnaces and the process of refining iron into steel, warmly praising the quality of the steel produced. Yet another report, sent by a Capt. J. Campbell, also

described steel-producing units in South India. According to all these reports there were thousands of small steel-making furnaces in the region at the time.

Dharmapal also refers to a letter written by a Dr. Helenus Scott to Sir Joseph Banks, President, Royal Society, London (circa 1790-1800), in which Scott said iron-steel was plentifully manufactured in India at the time, and “it is employed for chisels,....for files and saws, and for every purpose where excessive hardness is required.” Incidentally but interestingly, Scott’s letter also contains the following information on many fields in which Indian technology was far superior to contemporary European technology: Indians knew the technology of producing the best mortar and *chunam* (lime) used as building material. They had an excellent method of preparing *chunam* suitable for underwater work. This *chunam* was clearly superior to cement. Copper was also plentifully used by Indians even 700 years earlier. Indians knew the technology of dyeing cotton cloth and of how to make the colour fast. They knew how to make soap, gun-powder, indigo, ink, cinnabar, vitriol, alum etc. To cap it all, telescopes were in common use by Indians, said another letter, written by a Col. Peeree to the Secretary, Royal Society, London, on Sept. 22, 1783 from Madras.

In 1874 the British established the Bengal Iron Company and began large-scale production. Costly steel began to be imported. As a result village production began to decline, and by the end of the 19th century indigenous steel manufacturing as a village industry nearly stopped. Thus the Indian steel technology virtually vanished. “Today only a few examples of this technology remain with a few tribal people of Jharkhand.” (Suresh Soni, *India’s Glorious Scientific Tradition*.)

Among other metals, ancient Europeans knew silver but not the substance that shone like silver but acted like a fluid – mercury. In fact, as late as until the 17th century they did not know what mercury was. Consequently documents of the then French

government referred to it as quicksilver – liquid silver. Indian / Ayurvedic medicines containing mercury used to be imported into the country in those times, but the government made a law saying such medicines could be used only by specialists.

➤ Ship-Building

Sanskrit and Pali literature has numerous references to international maritime activity of ancient Indians. Ships have been mentioned in Hindu scriptures like the Vedas, Puranas, Ramayana and Mahabharat. Ramayana mentions ships that were large enough to carry hundreds of warriors. Mahabharat even mentions a boat with a mechanical flag (sail) that could stand all kinds of winds. Panini (c. 2000 BC) refers to various types of boats and floats. In Pali literature too many *Jātaka*-s describe ships and sea voyages.

Ship-building technology has been described in *Brihat Samhita*, written by Varāhamihir in the 5th century and in *Yukti-Kalpa-Taru* written by a person called Bhoja Narapati (possibly king Bhoja) in the 11th century. These ancient Sanskrit treatises contain detailed technical information about the various types of ships and the materials from which they were built.

Greek chronicler Strabo (60 BC to 19 AD) says Alexander built a fleet of ships with the wood of pine, cedar and other trees in the forests in the territory he had conquered from king Porus during his invasion of India. Even before that, India appears to have exported timber suitable for ship-building and other construction to Mesopotamia in the times of king Nebuchadnezzar (609 BC - 562 BC), for the teakwood found in his palace is said to have come from India. According to the author of *Periplus*, Barygaza (Bharuch) exported teak and ebony to the ports of Apologues (Obollah) and Ommāna (Oman) on the South Arabian coast. In the early historical period most of the teak needed for building ships at Persian Gulf ports must have come from Honavar, Udayavarna, Cranganore and Nilesvara in South India. (*History of Science and Technology*.)

Describing the ships he saw when he came to India in the 13th century, Marco Polo wrote: "These ships are so huge that about 300 boatmen were needed to row them. About 3000-4000 gunny bags could be loaded in each ship. They had many small rooms for people to live in. These rooms had arrangements for all kinds of comfort." Another traveller, Nicolo Conti, who came in the 15th century, wrote: "Indian ships are much bigger than our ships. Their bases are made of three boards in such a way that they can face formidable storms. Some ships are made in such a way that if one part becomes useless, the rest of the parts can do the work." Yet another traveller wrote, "The wooden boards are joined in such a way that not a drop of water can go through." The ropes used to bind these boards were made from an "Indian nut", wrote Marco Polo. *Periplus* also stated that the boats were "sewn together" with ropes. What they meant was ropes made of coir. The English word "coir" is derived from the Malayalam words *kayar*, which means "rope" and *kayaru*, which means "to be twisted." Both these words in turn are probably derived from the Sanskrit *kunchanam* or *âkunchanam*, also meaning "to twist".

Coir as well as the related products jute, hemp and talipot (palm leaves) were exported from Kerala to the Roman Empire. "Jute" is derived from Sanskrit *Jatâ*, meaning a braid of hair, and *sunna*, one of the words for "hemp", originates from the Sanskrit *Shana*, according to the *Oxford English Dictionary*. "Talipot" is derived from Sanskrit *tâla-patra*, meaning palm-leaf. Palm-leaves were used for making fans, so "talipot" also meant a fan made of palm leaves.

When westerners came into contact with India in the 17th century and saw Indian ships they were highly impressed with their size, the quality of their construction, and their load-bearing capacity. In those days European ships were of a maximum 600 tonnes while Indian ships exceeded 1500 tonnes. So European companies not only started using Indian ships for their commerce but also established ship-building yards where they employed Indian artisans. In 1811

Lt. Walker wrote, "The ships in the British fleet had to be repaired every 12th year, but the Indian ships made of teak would function for more than 50 years without any repair." The East India Company had a ship called *Dariya Daulat* which functioned for 87 years without repairs. A French traveller by name Waltzer Salvins wrote in his book *Le Hindu* in 1811 AD: "Hindus were in the forefront in the art of ship-building, and even today they can teach a lesson or two to the Europeans....The British learnt lot of things about ship-building from the Hindus. There is a very good blend of beauty and utility in Indian ships...."

Between 1736 and 1863 as many as 300 ships were built in the shipyards of Mumbai. Shipyards were also set up on the east coast, and the one at Hoogly built more than 270 ships during the period 1781 to 1821. The East India Company's use of Indian ships became such a formidable factor in contemporary international trade that worried British shipping magnates began to pressurise the Company against their use. Dr. Taylor wrote: "When the Indian ships laden with Indian goods reached the port of London it created such a panic amongst the British traders as would not have been created had they seen the enemy fleet of ships on the River Thames, ready for attack." Workers at the London Port made a hue and cry, saying they would be ruined and their families would starve to death. At this the British Parliament set up a committee under the chairmanship of Sir Robert Peel, and in 1814 a law was passed by which Indians could not become sailors on British ships and it was made mandatory that only ships built in England could bring goods to England. At the same time regulations were also imposed in India that were aimed at ending Indian ship-building. "This way," to quote Sir William Digby, "the Queen of the western world killed the Queen of the eastern oceans."

➤ Navigation

Matsya Yantra: A type of mariner's compass was used by Indian navigators nearly 2000 years ago. J. L. Reid, member of the

Institute of Naval Architects and Ship-builders in England around the beginning of the 20th century, wrote in *Bombay Gazetteer*, vol. XIII, part ii, app. A: "The early Hindu astrologers are said to have used the magnet in fixing the North and the East, in laying foundations, and other religious ceremonies. The Hindu compass was an iron fish that floated in a vessel of oil and pointed to the North. The fact of this olden Hindu compass seems placed beyond doubt by the Sanskrit word *matya yantra*, or "fish machine", which Molesworth gives as a name for the mariner's compass." It is quite possible that the Matsya Yantra was transmitted to the West by the Arabs to give us the mariner's compass of today. (*Indian's Contribution to World Culture*.)

Monsoon winds: Long before Hippalus the Greek discovered the monsoon winds Indian sailors possessed sound knowledge of the periodicity and regularity of winds in the Indian Ocean, without which Harappan vessels could not have made regular voyages to the East African coast, Egypt, the Bahrein islands and the Persian Gulf, as indicated by the thriving trade in luxury goods as well as articles of daily use. Indian sailors had also developed astronomy as a practical science and used the position of stars for charting their course on the high seas.

➤ **Agriculture**

"The line drawn by the plough is the line dividing wildness and civilization in human history." This inscription at the entrance of the Udaipur Agricultural University defined the core of the Hindu civilization that was the origin of human civilization. Agriculture has been praised in mankind's oldest scripture, the Rig Veda, which enjoins – "Cultivate, and earn with respect." "Agriculture is the basis of human life," says the ancient Sanskrit work *Krishi Parâshara*. There are also references to agriculture in various Hindu scriptures like Nârada Smriti, Agni Purâna etc.

Ancient Hindus made a careful study of the changes in the climate and in the movements of the planets and stars, and accordingly

decided the right time for tilling the land. Even the best time for harvesting was given by sage Garga, as quoted by sage Parâshara. In the Vedic Age itself sowing and harvesting were done with agricultural implements like plough, sickle, sieve etc. and crops like rice, barley and wheat were grown. Ancient Indian farmers also understood and practised the method of rotational cultivation to increase the fertility of the soil. According to Romesberg, father of Botany in Europe, the West adopted this technique much later. Regular irrigation systems were also developed to help agriculture. Megasthenes wrote that the king used to appoint officials to examine the river and the wells and to ensure equal distribution of water to the main drains and their branches.

The Indian agricultural system and its implements were praised by the British, says Dharmapal in *Indian Science and Technology in the 18th Century*. The method of sowing in rows was especially appreciated. It was first followed in Europe in Austria in 1662 and in England in 1730. In a letter written to the Agricultural Board of England in 1797 Thomas Holcott said this system had been in use since ancient times. He also sent some Indian ploughs to the Board so that the British copy them, as they were more useful and much cheaper than British ploughs.

In addition to growing food-grain crops ancient Indian agriculture also produced agro-based products. For instance, methods had been invented for extracting oil from coconut, sesame etc. with oil presses and oil mills. The extracted oil was refined by passing it through special sieves. Greek historian Ktesias has described various Indian methods of extracting oils from trees for use as lubricants and perfumes. Sugar was also manufactured. This presumes knowledge of a process of vaporisation, condensation and crystallisation of sugar, as also existence of apparatus like a sugarcane press, a furnace etc. References in Sanskrit literature as well as observations by foreign historians show that various agro-products made in India were exported since the last 2000-2500 years.

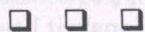
➤ Weaving

Weaving technology too seems to have a Vedic origin. The Vedas say that sage Gritsamad was the first to sow cotton and make a thread (*tantu*) of it. He then designed a wooden bobbin, and with it wove the thread into cloth. Later, cloth began to be woven with threads of other materials like silk etc., which was coloured with natural dyes and embroidered with gold and silver.

Once upon a time Indian cloth was exported practically all over the world. Traders from Greece, Egypt and Arabia ordered cotton cloth from India, especially the *mulmul* (muslin) from Bengal, which became famous as Dacca Mulmul. It was so fine that an entire length could be passed through a ring. Describing Indian cotton clothes, French traveller and trader Tavernier, who visited India in the 17th century, wrote: "They are so light and beautiful that you cannot even feel them with your hands, and the delicate embroidery is hardly visible...."; they are "so fine that the wearer's body is visible as if he is naked."

The British were also equally overwhelmed. In his book *The Industrial Arts of India* Sir G. Birdwood wrote: "The British and European authors have made poetic similes of the *mulmul*, the cotton and silk cloth, to a "bulbul's eye", "the throat of a peacock", "the moon and the stars", *Bafte Havâ* ("the stars of the wind"), "flowing water", and "evening dew". In 1835 Edward Benz went to the extent of writing: "Some of their *mulmul* clothes seem to have been made, not by humans but by fairies and butterflies."

And how did the British deal with the Indian artisans who wove this "incomparable and matchless" product? They cut off the thumbs that made it – so that there would be no competition for British cloth.



10. Art

Music began in the world with the Sâma Veda, the Veda that was to be sung. The Sanskrit word *Sâma* means a hymn or sacred song – and that is exactly what the Biblical *psalm* means, a sacred song. It is even pronounced exactly the same way – *Sâm*.

The Indian origin of Western music has been acknowledged by expert after Western expert since olden times. Ancient Greek author Strabo writes in his *Geography* : “From the song, the rhythm and the instruments, all Thracian music is supposed to be Asiatic. Those who regard the whole of Asia as far as India consecrated to Bacchus, refer to that country as the origin of a great portion of the present music.” In *The Indian Empire* W. W. Hunter says a regular system of notation had been worked out by Brahmins before the age of Panini, which passed through Persia and Arabia into European music. According to Lecy O’Leary the Pythagorean elements in western music can be traced to Indian sources. Alain Danielou, French authority

on Eastern music, says Greek music “most probably had its roots in Hindu music”, while H. G. Farmer writes in *Ancient and oriental music* that “instruments of music found their way into Greece from the orient in great numbers.”

German author Weber writes in his book *Indian Literature*: “The Hindu scale *sâ, re, ga, ma, pa, dha, ni* was borrowed by the Persians, where we find it as *do, ré, ma, fa, so, lé, ei*. From there it came to the West and was introduced by Guido d’Arezzo in Europe in the form of *do, ré, mi, fa, sol, lo, ti*....Even the *gamma* of Guido (French *gramma*, English *gamut*) goes back to the Sanskrit *gramma* and Prakrit *gamma*, and is thus a direct testimony of the Indian origin of our European scale of seven notes.”

➤ **Painting**

The Hindu art of painting is as old as the Hindu Epics. The Ramayana mentions *chitrashalas*, picture galleries, and every Indian royal palace had one of its own. In later times Ajanta became a world-famous symbol of the excellence of ancient Indian art. Ajanta exemplifies the peak of perfection in fresco painting. About these paintings British researcher Griffith says: “The artists who did the paintings in Ajanta were the topmost people in the world of creations. Even the straight vertical lines drawn with easy brush-strokes on the walls of Ajanta are amazing. But one who looks at the lines drawn parallel to the horizon and the curves, sees the similarity and wonders at the thousand complexities of creation. It is felt that this is nothing short of a miracle.”

European archaeologist Strzygowsky has compared the masonic background of the Ajanta caves with the Ravenna mosaics found in Europe. Some Indian motifs are also traceable in Gothic paintings and sculptures. The occurrence of images of the lotus, elephants and the *Swastika* clearly suggests that they could have been borrowed from India, as these images are traditional Hindu motifs.

➤ Dance

Dance was another example of Art originating in Religion. Shiva is called *Natarâj*, Lord of Dance, and his Dance of Destruction is known as *Tândava*. Dancing before the temple deity as a form of worship developed into different dance forms in different regions of the country and together came to be called classical dances. At the same time, right from Vedic times the common folk celebrated their festivals and expressed their happiness and joy on other special occasions, like harvesting and weddings, with dancing. These were the folk dances.

While western dance has not directly borrowed anything from Indian classical dances, it has borrowed from Indian folk dance through the gypsies. The gypsies, as has been established, migrated from India to the west about a thousand years ago and settled in various countries of Europe. They were probably the Banjar nomads still found in India. Being a carefree nomadic community, they earned their living by performance of folk dances along with other nomadic activities.

Gypsy dance has influenced Western dance styles like the Waltz and the Foxtrot. Even the American Break Dance and other dances associated with Jazz music have borrowed from the Gypsy folk dance. The Gypsy folk dance is itself a free-flowing and carefree dance, a modified version of which is found in the folk dances of many Vanavasis and nomadic tribal communities in India. (*India's Contribution to World Culture.*)

➤ Elephant Motif

Discussing ancient Indian designs and folklore in *Matter, Myth and Spirit, or Keltic and Hindu Links*, Dorothea Chaplin refers to the traditional elephant motif in Indian art and architecture and writes, "The designs and beliefs centred round the elephants are....emphatically revealed in the antiquities of....Scandinavia" – although elephants do not breed anywhere in Europe.



11. Trade

THE WESTERN maritime links of ancient Indians reach back to Rigvedic times. 5000 years ago the *Pani* merchant community mentioned in the Rig Veda had set up a flourishing trading post on the east coast of the Mediterranean, from where they controlled international trade in a large variety of Indian commodities. They had their godowns in Corsica, Sardinia, Malta, Rhodes and other European locations, and the trade of the whole of Europe of those hoary times was in their hands. For 1300 years the *Pani* were the sole controllers of contemporary world trade. According to David Frawley the *Pani* and the Phoenicians could well have been the same. Both were enterprising merchants and seafarers. The Greeks called the Phoenicians *Phoenike*, while the Romans called them *Poeni*, which is not far removed from *Pani*.

There are also accounts in the Puranas about ancient India's trade contacts with foreign countries, and they have Biblical support. As earlier mentioned, Caldwell and

Foulkes are of the opinion that the spices carried into Egypt by the Midianite merchants mentioned in the Bible (*Genesis*, XXVII) and by the sons of the patriarch Jacob (*Genesis*, XIII) had started from south India.

Even before Biblical times ancient Indians had traded with Babylon from 2000 BC up to the 5th century BC. With the decline of the Babylonian and Egyptian civilizations Arabia became India's highway of trade with the Hellenistic world and later with the Roman Empire.

The Arabs brought to Europe an abundance of Indian luxuries. These included fancy goods like oriental carpets, decorated arms, silk, velvet, and fine furniture. European merchants from France, Italy and Spain went to Alexandria and other trading centres in the east to obtain sugar, spices, perfumes, silk, muslin, cotton cloth, carpets, pearls, porcelain, glassware, wheat and leather brought there from India, especially to Venice and Genoa. Venice employed more than 3000 ships for such trade. The Arabs also introduced into Europe a great many plants and trees that were unknown there, such as rice, sugarcane, mulberry tree, apricot, asparagus, artichoke, beans and hemp, and also some flowers like jasmine and camelia mentioned by poet Dante. (*India Abroad*.)

On the other hand Indian traders had also established their own colonies in Greece and Egypt, from where they traded in a wide variety of imports from India, such as ivory, diamonds, rubies, ornaments, high-quality cotton and silken fabrics, rice, decorated vessels, and valued Indian spices like pepper, cloves and cardamum – and even turtle's eggs.

Along with textiles, especially silk, spice was the other Indian commodity that substantially drained Rome of its wealth. In fact the spice trade wrote an important chapter in ancient India's international history. When Alexander returned from his invasion of India a major item he carried back was spices. The Egyptians used spices for

embalming their mummies, and following in their footsteps the Romans used spices in their funerary rites. The spice trade was apparently under Greek control since Alexander overthrew the vast Achaemenid (Persian) empire stretching from Afghanistan to Egypt, but with his death the Greek hold on the region weakened, and Bactria became a major route for the spice trade by land. Soon after, the Romans conquered Egypt and the Middle East and became the international power, carrying out expeditions abroad. The Roman generals Pompey and Luculus are said to have carried Indian spices to Rome. This flourishing international trade is reflected in the finds of Roman coins at various sites in India.

During the BC period of the Roman Empire there were also regular political contacts between India and Rome, and Indian rulers had sent missions to Roman emperors on at least three occasions, writes RC Majumdar. In those days Alexandria was the meeting point, which had a resident Indian population, according to Diochrysostom (117 AD).

On the other hand Kushana coins from India have been discovered in Scandinavia, showing ancient India's trade contacts with such a far-northern region of the world. According to Dr. B. Prakash, "Some North European and Scandinavian traders were settled on the west coast of India and had adopted the Buddhist religion. They must have been in contact with their parent-country by land and sea routes, and it must have been through them that the Buddhist image must have reached Sweden, obviously for the purpose of worship and devotion."

In Russia too an Indian traders' colony was set up at Astrakhan on the Volga in the 17th century. Later "Indian religious men" and artisans also came and taught their arts and crafts to Russians. These Hindus married Russian girls and settled there around 1780 AD. (D. B. Diksalkar, *Hindus in Afghanistan, Persia and Russia in 1773 in Journal of the Greater Society*, Vol. IV, July 1937.)

Finally, apropos ancient India's remarkable exports, two of them that are not commodities and are yet unusual enough to merit mention are Chess and Aerobics. Chess was an Indian invention and was called *Ashtapada*. The Arabs borrowed the games of Chess and Dice from the Hindus. Arab chronicler Yakubi remarked that "these games stand for two aspects of Indian philosophy. Dice indicates fatalism, and chess stands for action." From the Arabs, Chess went to Europe. The other is Hatha Yoga. This 5000-year-old Yoga system is the origin of various aerobic and gymnastic exercises in Europe and elsewhere all over the world. Finally, an interesting titbit: According to Pococke, Roma, the Latin name of Rome, is derived from Sanskrit 'Rama'; he says Sanskrit Â becomes O in Latin.



12. Civilization

HINDUS civilized Europe. That is the sum and substance of the foregoing narrative. It is the story of how Europeans from ancient ages to modern times borrowed almost every major aspect of civilized societal life from the Hindus – from metaphysic to mathematic, astronomy to agriculture, surgery to steel technology. And savant after European savant has acknowledged this fact. In fact they went further. They acknowledged that Hindus civilized much more than Europe; they civilized the world.

Among leading European scholars who have made such acknowledgement Count Biornsteirna observes in his book *The Theogony of the Hindus*: “No nation can vie with the Hindus....The high civilization of the Hindus gradually extended itself in the West to Ethiopia, to Egypt, to Phoenicia, in the East to Siam, to China, and to Japan, in the South to Ceylon, to Java and Sumatra, in the North to Persia, to Chaldea and to Colchis, whence it came to Greece and Rome....”

French savant M. Delbos is still more generous with his praise. He writes: "The influence of that civilization, worked out thousands of years ago in India, is round and about us every day of our lives. It pervades every corner of the civilized world. Go to America and you find it there as in Europe, the influence of that civilization, which came originally from the banks of the Ganges."

Another scholar, L. A. Waddell, who also noted that in ancient times all mankind had a common culture, stated: "We discover that the hitherto inexplicable unity in the essentials of all the ancient civilizations is owing to the original unity of the higher civilization and its diffusion throughout the world by its originators, the ruling race of Aryans...." As these "originators" were the Druhyu/Druid Vedics, the first to reach Europe in the misty past, Geoffrey Higgins writes, "... the Druids of the British Isles were the priests of a very ancient nation called Celtac.... Those Celtac were a colony from the first race of people.... who escaped the effects of the Deluge to the borders of Greece, Italy, France and Britain.... All the languages of the Western world were the same, and that one system of letters, that of the ancient Irish Druids, pervaded the whole world. It was common to the British Isles and Gaul, to the inhabitants of Italy, Greece, Syria, Arabia, Persia and Hindustan."

Elsewhere Higgins observes, "In examining the very early histories of the modern parts of Europe, we everywhere meet with the monumental remains of a race of persons called Druids. In many places the ruins of which I speak are very great in size and perhaps in remote ages have been highly ornamented and of great magnificence."

Apropos the popular perception that European civilization originated in Greek civilization but does not question where Greek civilization itself originated, E. Pococke writes in *India in Greece*: A seafaring people, lived "at the mouths of the Indus," who emigrated to the "far distant climes of Greece." Their "magnificent results to civilization and gigantic monuments of art fill the mind with mingled emotions of admiration and awe." They founded the kingdoms of

Egypt, Nubia and Abyssinia, and “centuries subsequently to this colonization spread the blessings of civilization over Hellas and her islands.” Elsewhere in the same book Pococke adds: “Among the strongest peculiarities of the so-called heroic period of Greece, appear the perfection of the arts and the abundance of gold; the profusion of gold vessels; their varied yet elegant workmanship; the beauty of embroidered *shawls*; the tasteful and ample produce of the loom, the numerous ornaments of ivory; the staining and working of the material; the gift of necklaces as a valuable present, sometimes too from the gods; the brazen tripods and the cauldrons; the social refinement and comfort; the magnificent palaces of Alcinous and Menelaus; finally the great contest of Troy, the constant use of the war chariot.... The whole of this state of society, civil and military, must strike anyone as eminently Asiatic; much of it specifically Indian. Such it undoubtedly is.... these evidences were but the attendant tokens of an Indian colonization with its corresponding religion and language.... the whole of Greece, from the era of the supposed godships of Poseidon and Zeus, down to the close of the Trojan war (was) Indian in language, sentiment and religion, and in the arts of peace and war.”

On the societal level Greek thinkers accepted the Hindu *Varnashrama* social-cum-vocational classification system. At the same time they also accepted the Hindu proposition that a person could change his *varna* with his own efforts. In the field of education too Plato laid down basic principles that were already observed in ancient India. RP Sharma has given in his book a regular list of these. He has also quoted a description of a school of Pythagoras where the daily routine of the students was strikingly similar to that of a *gurukul*.

Among other scholars and Indologists Winternitz, Max Muller and Garbe agree that centuries before Christ there were in Persia, Asia Minor and Alexandria seats of learning who played an important part in the intellectual fellowship promoted by these centres, where

Indian ideas were most popular. These ennobling ideas and achievements that came from India not only reached Greece and the rest of Europe but traversed the entire contemporary world.

In acknowledgement of this historical truth *The Edinburgh Review* wrote in October 1872: "The Hindu is the most ancient nation of which we have valuable remains and has been surpassed by none in refinement and civilization. Though the utmost pitch of refinement to which it ever arrived preceded in time the dawn of civilization in any other nation of which we have even the name in history, the further our inquiries are extended here, the more vast and stupendous is the scene which opens to us."

Summing up this ancient situation Geoffrey Higgins wrote: "The peninsula of India would be one of the first peopled countries, and its inhabitants would have all the habits of the progenitors of man before the flood in as much perfection or more than any other nation.... In short whatever learning man possessed before his dispersion.... may be expected to be found here, and of this India affords innumerable traces...."

And finally, the most graceful civilizational imprint of India that is spreading from Europe to America – the greeting *Namaskâr* with folded hands. In Scotland a statue of 'Mary, Queen of Scots' has been found standing in the *Namaskâr* pose. In the sea between England and Ireland, called the Irish Sea, there is an island called the Isle of Man. Significantly enough, the Irish name of the island is *Manu*. As the word 'man' is accepted to have been derived from *Manu* / *Mânava*, both the English and Irish names of the island clearly have a Hindu heritage. This heritage is underlined by the report that some old statues found on the island are figures standing with folded hands in the *Namaskar* position.

And now, to this day, the Pope, the living symbol of Christianity, himself stands on special occasions exactly the same way – with hands folded for a Hindu *Namaskar*.

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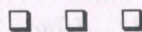
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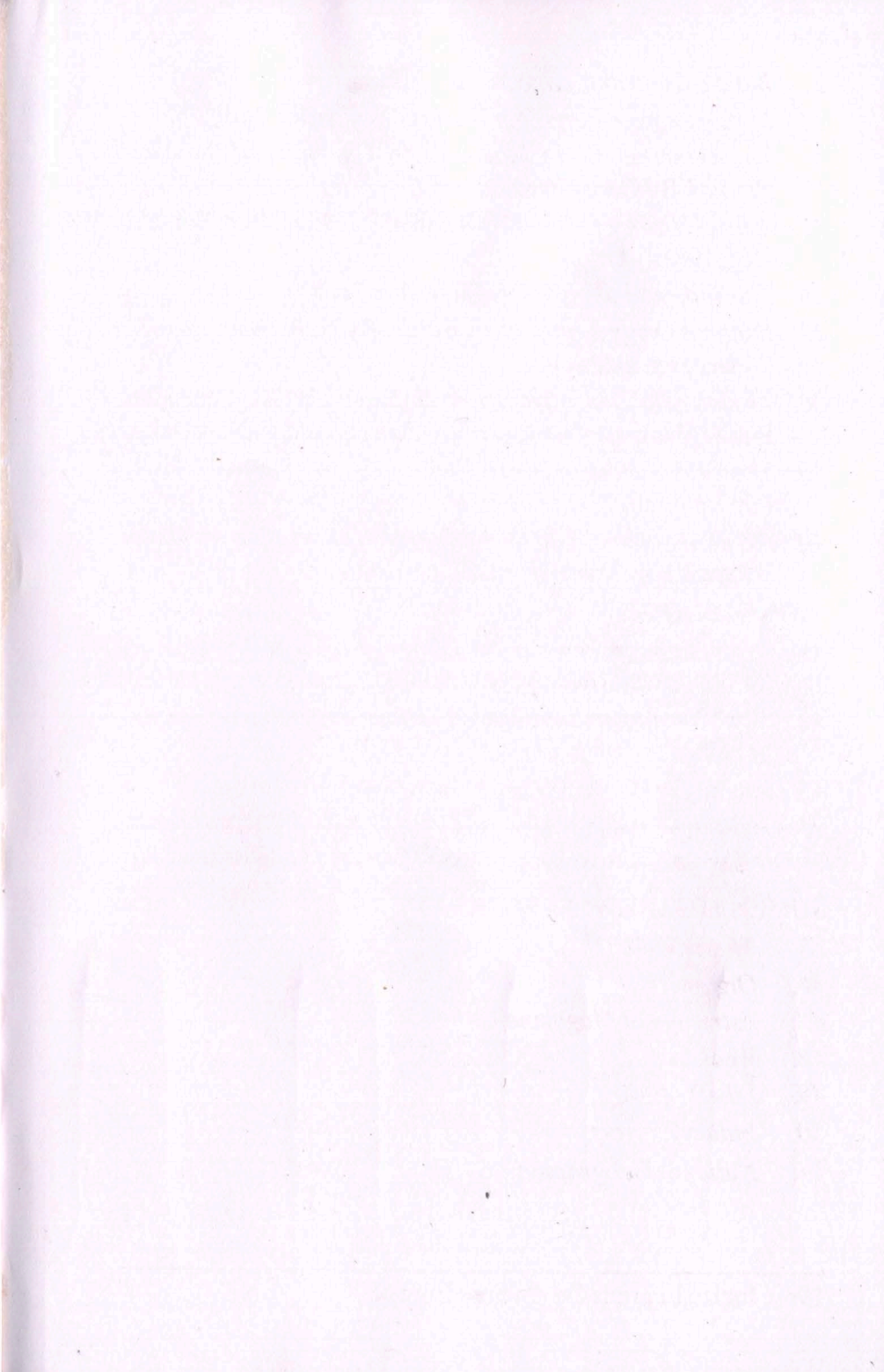
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Sudhakar Raje is a journalist, author and a former diplomat. He is a former editor of the weekly Organiser and currently edits Hindu Vision, a monthly magazine published by Vishwa Samvad Kendra, Mumbai.

He wrote a popular humour column in Organiser for over 50 years. His articles have appeared in English and Marathi. Articles in English have also appeared in foreign journals.

Raje's main areas of study are Ancient History and Comparative Religion. He has written half a dozen books in English and Marathi, including ancient history of Tibet and the Middle East, as also a guide to English conversation. He has also written a thousand-page Global Story of Hindu Civilization due to be published very shortly.

Raje is also a translator and has translated more than 20 books from Marathi and Hindi into English, including four volumes of former Prime Minister Shri Atal Behari Vajpayee's parliamentary speeches in Hindi.

Sudhakar Raje held a diplomatic position for two years as Director, Indian Cultural Centre (Govt. of India), Georgetown, Guyana, South America. He has widely travelled in India and abroad, and has been to England, Germany, America, Canada and the Caribbeans.



भाविसा

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